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SESSIONAL PAPERS

VOLUME 9

FOURTH SESSION OF THE TENTH PARLIAMENT

OF THE

DOMINION OF CANADA

SESSION 1907-8

9766
9709

VOLUME XLII

See also Numerical List Page 5.

ALPHABETICAL INDEX

TO THE

SESSIONAL PAPERS

OF THE

PARLIAMENT OF CANADA

FOURTH SESSION, TENTH PARLIAMENT, 1907-8

A

Acetylene Gas Buoys.. 209
Adulteration of Food.. 14
Agriculture, Annual Report.. 15
Alaska Boundary.. 54
Aluminum Exports and Imports..136, 136*a*
Applications for crossing railway tracks.. 86
Archives, Canadian.. 18
Astronomer, Chief, Report of.. .. .. 25*a*
Athabasca Fish Co... 225
Auditor General, Annual Report.. .. 1

B

Bait Freezer and Cold Storage.. 101
Banks, Chartered.. 6
Banks, Unpaid Balances in.. 7
Barbados, Trade Conference at.. 158
Bastedo, Samuel Tovel.. 139
Bate, H. N. & Co.. 199
Beauharnois Canal.. 83
Belleville Harbour.. 163
Bell Telephone Co... 122
Blunden, Frederick.. 165
Bonds and Securities.. 44
Boone Company.. 177
Bounties paid by Government.. 93
Bow River.. 202
Bridge Materials from U. S... 194
British and Continental Ports.. .. .. 21*c*
British Canadian Loan and Investment Co... 128
British Columbia:—
Chinese in Public Schools.. 74
Disallowance.. 84
Dominion Lands.. 46
Indian Reserves.. 169
Joly de Lotbinière, Sir Henri.. .. 75
Metlakatla Indian Reserve.. 89
Natal Act.. 99
Patterson, J. W... .. .. 90*b*
Revenue and Expenditure.. 219

B

British Columbia:—
Richard L. Drury.. 164
W. Maxwell Smith.. 111
Brodeur, Hon. L. P., &c., Travelling Expenses.. .. ..109, 109*b*
By-Elections, House of Commons.. .. 17*b*

C

Canada Year Book.. 66
Canadian Manufacturers' Association.. .. ..234, 234*a*
Canadian Pacific Railway:—
Business with Interior Department. 45
Lands sold by.. 69
Liability for Taxation.. 203
Canadian Transportation.. .. .. 21*c*
Canal Statistics.. .. .. 20*a*
Cassels, Hon. Walter.. .. ..182 to 182*c*
Cattle Embargo.. 187
Census, Agricultural.. 188
Census, North-west Provinces.. .. .. 17*a*
Central Experimental Farm.. .. ..80, 112
Chartered Banks.. 6
Chinese and Japanese.. .. .. ..74*b* to 74*g*
Civil Service:—
Examiners.. 31
Insurance.. 49
List.. 30
Report of Royal Commission 29*a*
Superannuations.. 51
Coal Lands.. .. ..108 to 108*h*
Coal, Timber and Mining Lands. 88 to 88*bb*
Cold Storage and Bait Freezer.. .. 101
Cold Storage Report.. .. .. 15*a*
Colonial Conference, 1907.. .. ..58, 109*a*
Colonization Lands.. .. ..155 to 155*d*
Commissions of Inquiry.. .. .. 182*d*
Congdon, F. T.. .. ..55 to 55*f*
Convicts in Penitentiaries.. 179
Criminal Statistics.. 17
Customs Department Officers.. .. .. 156*c*

D

Dairy and Cold Storage Report.. .. 15*a*
Delisle, Michel Simeon.. 210
Dividends Unpaid in Banks.. 7
Dolkese Indians.. .. ..197, 197*a*
Dominion Lands.. .. .. 90*c*
Dominion Police.. 67
Dredging Work.. 124 to 124*c*, 141, 141*a*, 204
Drill Halls.. 193
Drysdale, Hon. Arthur.. 176
Dunne, M. C... .. .. 81*a*

E

Eclipse Manufacturing Co... 129
Edwards, W. C. & Co... 199
Elections, House of Commons.. .. .. 17*b*
Elections, Forms for.. 64
Electricity and Fluid Exportation Act 137
Electric Light, Inspection of.. 13
Estimates.. .. ..3 to 4*a*
Exchequer Court Rules.. 53
Excise Revenue.. 12
Expenditure by Government in N.S. 102
Experimental Farms.. 16

F

Fast Line of Steamers.. 100
Fertilizers, Analysis of.. 235
Fishermen, Bounty to.. .. ..56 to 56*b*
Fire Extinguishers.. .. ..160, 160*a*
Fisheries Act, Violation of.. 168
Fisheries, Annual Report.. 22
Fisheries Treaty.. .. ..215, 215*a*
Fishing Licenses.. 143
Forbes, F. F., Judge.. 85
Forestry, Report of Supt. of.. 25
France and Canada, Commerce..10*a*, 10*b*

G

Garrison Artillery Companies.. 196
Gas, Inspection of.. 13
Gaudet, Victor, Report of.. 211
Geographic Board.. .. .. 21*a*
Geological Survey Report.. 26
Georgian Bay Ship Canal.. 19*a*, 178 to 178*b*
Government Vessels.. .. .. ..148, 148*a*, 170
Governor General, Expenditure for office of.. 146
Governor General's Warrants.. 50
Grain, Movements of.. 192
Grain Trade, Report of Royal Commission.. 59
Grand Trunk Pacific Town and Development Co... .. .. 90*c*

G

Grand Trunk Railway:
Entrance into Toronto.. 63
Major's Hill Park Site.. 76
Sale of Liquors.. .. ..61, 61*a*
Grazing Lands.. .. .. 155*a*

H

Harbour Commissioners.. 23
Heath Point.. 198
Hillsboro' Bridge.. 186
House of Commons:—
Changes in the Staff.. 149
Elections for.. .. .. 17*b*
Internal Economy.. .. ..37, 37*a*
Returns presented.. 150
Hudson Bay, Railroad to.. 138
Huntingdon, Waterway in.. 161

I

Immigrants, Expenditure for.. .. .. 81*j*
Immigrants in Canada.. .. .. ..81*d*, 81*g*
Immigration Agents.. .. ..81*c*, 81*b*
Immigration Agents in Ontario.. ..81*b*, 81*h*
Immigration from the Orient and India.. .. .. 36*a*
Imperial Conference, 1907.. .. ..58, 109*a*
Indian Affairs, Annual Report.. 27
Indian Agent Yeomans.. 103
Indian Reserves.. 159
Industrial Disputes Inspection Act.. 131
Inland Revenue, Annual Report.. .. 12
Insurance, Abstract.. 9
Insurance, Annual Report.. 8
Intercolonial Railway:—
Accident at Mulgrave.. .. .. 205*b*
Belfast and Murray Harbour.. .. 205*i*
Claims for Damages.. 205
Fences.. .. .. 205*g*
Freight Rates.. .. ..119, 205*a*
Highway Crossings.. .. ..39*k*, 39*l*
Locomotives.. .. ..205*d*, 205*f*
New Accounting System.. .. .. ..205*h*
Steel Rails.. .. .. 205*e*
Trains Breaking Down.. .. .. .. 205*c*
Various Expenditures.. 78
Winter and Summer Tariffs..... 127
Interior, Annual Report.. 25
International Boundary.. .. .. ..54*a*, 54*b*
International Waterways Commission. 19*b*, 19*c*

J

Japanese and Chinese.. .. ..74b to 74*g*
Joly de Lotbinière, Sir Henri.. 75
Justice, Annual Report.. 34

L

Labour Department, Annual Report of 36
Lake, Major General, Memorandum of 228
Lands, Dominion.. .. .. 90*c*
La Société Canadienne.. 200
Library of Parliament, Annual Report 33
List of Shipping.. .. .. 21*b*

M

Madden, Report of Justice.. 60
Mail Subsidies to Steamships.. 82
Manitoba Homestead Entries.. .. .. 155*b*
Marconi Stations.. .. ..183, 183*a*
Marine and Fisheries Department, Bookkeeping in.. 142
Marine, Annual Report.. 21
Measures, Inspection of.. 13
Meat and Food Inspection Act..91, 134, 134*a*
Members of Parliament appointed to Offices.. .. ..52, 230
Metlakatla and Songhees Indians.. 197*b*
Midland Towing and Wrecking Co... 123
Military Institutions, Provisions for.. 104
Military Service, Appointments to the 94
Militia, Colonels in the.. 73
Militia Council, Annual Report.. .. 35
Militia Dress Regulations.. .. .. .. 41*a*
Militia General Orders.. 41
Miller, N. B... 81
Mill Settlement, West.. 171
M. J. Wilson Cordage Co.. 113
Mines, Report of Department.. ..26 to 26*b*
Mining, Coal and Timber Lands 88 to 88*bb*
Mint, Royal.. 71
Moncton Car Works.. 107
Montcalm-Milwaukee Collision.. 221
Montreal Examining Warehouse.. .. 120
Montreal Turnpike Trust.. .. .. 126, 126*a*
Mounted Police.. 28
Mulgrave, Nova Scotia.. .. .. 205*b*

Mc

McDonald, A. G... .. .. 81*i*
McIlreith, R. T... .. .. 181, 181*a*

N

National Transcontinental Railway. 39 to 39*h*
Engineering Staff.. .. .. 62*a*
Resignation of Mr. Hodgins.. 62
Routes in New Brunswick.. 180
Values of Tenders.. .. .. 62*b*
New Brunswick and Nova Scotia Mails 171*c*
Newspapers, Money paid to.. .. 174 to 174*b*
North Grove, Grenville.. .. .. 171*a*
Nova Scotia, Expenditure by government in.. 102

O

Office Specialty Co.. 184
Opium Traffic.. .. .. 36*b*, 36*c*
Orders in Council.. 47
Oriental Labourers, Report of W. L. M. King.. .. .. 74*a*, 74*h*
Ottawa Improvement Commission.. .. 70
Ouimet, Judge J. A... 65

P

Peace River Valley.. 106
Penitentiaries, Annual Report.. 34
Petit Rocher Breakwater.. .. .. 147, 147*a*
Petrel, Steamer.. 218
Pevelan & Co... 72
Piers or Docks in Ontario.. .. .. .. 92*a*
Police, Dominion.. 67
Police, Royal Northwest Mounted.... 28
Port Burwell Harbour.. 217
Port Maitland.. .. .. 92, 92*a*
Postal Charges.... .. .. 171*i*
Postal Service Delays.. .. .. 171*e*
Postmaster General, Annual Report. 24
Pound Net Licenses 130
Power, Augustus, Report of.. 55
Prince Edward Island:—
Alex. McLeod.. .. .. 171*h*
Archibald McDonald.. .. .. 171*d*
Branch Railway Lines.. 190
Expenditure.. 216
Freight and Passenger Rates.. .. 205*a*
Freight on Winter Steamers.. .. 110
Leasing Properties.. 145
Lobster Fishery.. .. .. 231*a*
Mail Service.. .. .. 171*j*
Mrs. Mary Finlay.. .. .. 171*b*
Removal of Post Office.. .. .. .. 171*g*
Rights of Vessels.. 208
Terms of Union.. 189
Wharf at Little Sands.. 125
Winter Communication.. 212
Withdrawal of Winter Steamers.. 110*a*
Printing and Lithographing.. 220
Public Accounts, Annual Report 2
Publications having Newspaper Rate. 195
Public Buildings.. .. .. 229, 232
Public Printing and Stationery 32
Public Works, Annual Report.. 19

Q

Quebec Bridge:—
Report of Royal Commission.. .. 154
Reports and Orders in Council.. 154*a*
Stock Subscribed.. .. .. 154*b*
Quebec, Founding of.. 207
Quebec Harbour.. 233

R

Railway Commissioners, Report of.... 20*c*
Railway Crossings.. .. ..39*i*, *k* and *l*, 115
Railways and Canals, Annual Report. 20
Railways not under Commissioners.. 39*j*
Railway Statistics.. .. .. 20*b*
Reductions and Remissions.. 95
Regina Lands District.. 77
Robertson, E. Blake, Report of.. .. .. 81*k*
Robins Irrigation Co... 206
Ross Rifle Company.... .. .. 68 to 68*d*
Ross Rifle Hand-book.. 42
Royal Northwest Mounted Police.. .. 28

S

Sabourin, Major.. 153
Samovici, A., and Bolocan, H.. 116
Saskatchewan, Province of:—
Fishing Licenses.. .. .. 105, 151
Homestead Entries.. .. .. 90, 90*a*
Saskatchewan Act.. 185
Valley Land Co.. .. .. 90*d*
Savard, Doctor Edmond.. 222
Secretary of State, Annual Report.. 29
Seed Grain.. .. .. 25*d*
Seizures by Inland Revenue Department.. .. .. 156 to 156*b*
Senate:—
Appointments to.. .. .. 52, 114
Bills sent from.. 121
Committee on Railways, &c... .. 166
Debates.. 135
Senators appointed to office.. 230
Shareholders in Chartered Banks.. 6
Shepley, Mr., K.C... 175
Shipping, List of.. .. .. 21*b*
Six Nations Indians.. .. .. 197*c*
Sorel, Piers at.. 167
Spain, Commander, Expenses of.... .. 162
Standard Chemical Co... 72
St. Andrews Rapids.. 96
Steamboat Inspection.. .. .. 23*a*
Steamship Fast Line.. 100
Steamship Traffic.. .. .. 10*c*
Steel Concrete Co... 172
St. Gabriel de Brandon.. .. .. 171*f*
St. Lawrence River, Damming of..140, 140*a*
Supplies for Department of Marine and Fisheries.. 214
Supreme Court, N.S., Suit in.... 117
Sutherland Rifle Sight Co... 226

T

Temperance Colonization Co... 223
Timber, Application to cut.. 78
Timber, Coal and Mining Lands..88 to 88*bb*
Tobacco Industry.. .. .. 157, 157*a*
Tonnage at St. John and Halifax.... 227
Topographical Surveys, Report on.... 25*b*
Toronto Harbour 213
Trade and Commerce, Annual Report 10
Trade and Navigation, Annual Report 11
Trade Unions.. 43
Transcontinental Railway.. .. .. ..39 to 39*h*
Transport on Government Account.. 224
Treaty between Great Britain and United States.. .. .. 215, 215*a*
Treaty Powers.. 144
Trent Canal.. 133

U

Unclaimed Balances in Banks.. 7
Unforeseen Expenses.... 48
United States Warships.. 191

V

Valleyfield, Regiment in.. .. .. 153*a*
Volunteer Camps, Contracts for.. .. 118

W

Waugh, James S... .. .. 81*e*
Weights, Measures, &c.. 13
Wilberforce, Dam at.. 132
Windsor, Detroit and Belle Isle Ferry Co... 98

Y

Yukon:—
Criminal Conspiracy.. 97
Estates of Deceased Persons.. .. 55*b*
Finnie, O. S... 152
Lands at Whitehorse.. .. .. 55*e*
Lord's Day Act.. 57
Mining Regulations.. 201
Morality of the Yukon.. .. .. .. 55*d*
Ordinances.. 40
Placer Claims.. .. .. 173, 173*a*
Report of Commissioner.. .. .. .. 25*c*
Report of Mr. Beddoe.. .. .. 55*h*
Rev. John Pringle.. .. .. 55*c*, 55*f*
Right to divert water.. 87
W. H. P. Clement.. .. .. 55*i*
W. W. B. McInnes.. .. .. 55*g*

See also Alphabetical Index, page 1.

LIST OF SESSIONAL PAPERS

Arranged in Numerical Order, with their titles at full length; the dates when Ordered and when Presented to the Houses of Parliament; the Name of the Senator or Member who moved for each Sessional Paper, and whether it is ordered to be Printed or Not Printed.

CONTENTS OF VOLUME 1.

(This volume is bound in two parts.)

1. Report of the Auditor General for the nine months ended 31st March, 1907. Partial report presented 28th November, 1907, by Hon. W. S. Fielding; also 2nd December and 17th December .. ..*Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 2.

2. Public Accounts of Canada, for the fiscal period of nine months ended 31st March, 1907. Presented 28th November, 1907, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.

3. Estimates of the sums required for the services of Canada for the year ending 31st March, 1909. Presented 11th December, 1907, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.

3*a*. Further Supplementary Estimates for the year ending 31st March, 1909. Presented 9th July, 1908, by Hon. W. S. Fielding...*Printed for both distribution and sessional papers.*

4. Supplementary Estimates for the twelve months ending 31st March, 1908. Presented 3rd February, 1908, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.

4*a*. Supplementary Estimates for the year ended 31st March, 1908. Presented 16th March, 1908, by Hon. W. S. Fielding... .. ..*Printed for both distribution and sessional papers.*

5. (No issue.)

6. List of Shareholders in the Chartered Banks of Canada, as on the 31st December, 1907. Presented 8th May, 1908, by Hon. S. A. Fisher.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 3.

7. Report of dividends remaining unpaid, unclaimed balances and unpaid drafts and bills of exchange in Chartered Banks of Canada, for five years and upwards, prior to 31st December, 1907. Presented 29th June, 1908, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 4.

8. Report of the Superintendent of Insurance for the year ended 31st December, 1907.
Printed for both distribution and sessional papers.

9. Abstract of Statements of Insurance Companies in Canada, for the year ended 31st December, 1907. Presented 14th May, 1908, by Hon. W. S. Fielding.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 5.

10. Report of the Department of Trade and Commerce, for the fiscal year (nine months) ended 31st March, 1907. Part I.—Canadian Trade. Presented 29th November, 1907, by Hon. W. S. Fielding. Part II.—Trade of Foreign Countries and Treaties and Conventions. Presented 11th March, by Hon. W. Paterson.

Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 6.

10*a*. Convention respecting the Commercial Relations between France and Canada, entered into at Paris on the 19th day of September, 1907, between His Majesty and the President of the French Republic. Presented 28th November, 1907, by Hon. W. S. Fielding.

Printed for both distribution and sessional papers.

10*b*. Correspondence and memoranda in connection with the Convention of 1907, respecting the commercial relations between France and Canada. Presented 9th January. 1908, by Hon. W. S. Fielding.. .. ..*Printed for both distribution and sessional papers.*

10*c*. Supplement to Report of Department of Trade and Commerce, with statistics showing steamship traffic, &c. Presented 17th March, 1908, by Sir Wilfrid Laurier.

Printed for both distribution and sessional papers.

11. Tables of the Trade and Navigation of Canada, for the nine months of the fiscal year ended 31st March, 1907. Presented 2nd December, 1907, by Hon. W. Paterson.

Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 7.

12. Inland Revenues of Canada. Excise, &c., for the nine months ended 31st March, 1907. Presented 28th November, 1907, by Hon. W. Templeman.

Printed for both distribution and sessional papers.

13. Inspection of Weights, Measures, Gas and Electric Light, for the nine months ended 31st March, 1907. Presented 28th November. 1907, by Hon. W. Templeman.

Printed for both distribution and sessional papers.

14. Report on Adulteration of Food, for the nine months ended 31st March, 1907. Presented 28th November, 1907, by Hon. W. Templeman.

Printed for both distribution and sessional papers.

15. Report of the Minister of Agriculture, for the year ended 31st March. 1907. Presented 2nd December, 1907, by Hon. S. A. Fisher.

Printed for both distribution and sessional papers.

15*a*. Report of the Dairy and Cold Storage Commissioner for the year ending 31st March, 1907. Presented 10th February, 1908, by Sir Wilfrid Laurier.

Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 8.

16. Report of the Directors and Officers of the Experimental Farms for 1906. Presented 10th January, 1908, by Hon. S. A. Fisher.

Printed for both distribution and sessional papers.

17. Criminal Statistics for the year ended 30th September, 1907.

Printed for both distribution and sessional papers.

17*a*. Census of Population and Agriculture of the Northwest Provinces: Manitoba, Saskatchewan and Alberta, 1906. Presented 18th February, 1908, by Hon. S. A. Fisher. *See 17a, 1907.*

17*b*. Return of By-Elections for the House of Commons of Canada, held during the year 1907. Presented 6th March, 1908, by Sir Wilfrid Laurier.

Printed for both distribution and sessional papers.

18. Canadian Archives. *See No. 15, page lv.*

CONTENTS OF VOLUME 9.

19. Report of the Minister of Public Works, for the fiscal period ended 31st March, 1907. Presented 2nd December. 1907, by Hon. W. Pugsley.
Printed for both distribution and sessional papers.

19a. Georgian Bay Ship Canal Survey. Report on the Precise Levelling; from 1904 to 1907. Published by the Department of Public Works.
Printed for both distribution and sessional papers.

19b. Progress Report of the International Waterways Commission. Supplementary Report to 31st December, 1907. Presented 5th June, 1908, by Sir Wilfrid Laurier.
Printed for both distribution and sessional papers.

19c. Supplementary Report of the International Waterways Commission, 1908.
Printed for both distribution and sessional papers.

20. Report of the Department of Railways and Canals, for the fiscal period from 1st July, 1906, to 31st March, 1907. Presented 29th November, 1907, by Hon. G. P. Graham.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 10.

20a. Canal Statistics for the season of navigation, 1906.
Printed for both distribution and sessional papers.

20b. Railway Statistics of Canada for the year ended 30th June, 1907. Presented 16th January, 1908, by Hon. G. P. Graham.*Printed for both distribution and sessional papers.*

20c. Second Report of the Board of Railway Commissioners for Canada, 1st April, 1906, to , 31st March, 1907. Presented 29th November, 1907, by Hon. G. P. Graham.
Printed for both distribution and sessional papers.

21. Report of the Department of Marine and Fisheries (Marine) for 1907. Presented 18th December, 1907, by Hon. L. P. Brodeur.
Printed for both distribution and sessional papers.

21a. Seventh Report of the Geographic Board of Canada, 1907-8.
Printed for both distribution and sessional papers.

21b. List of Shipping issued by the Department of Marine and Fisheries, being a list of vessels on the registry books of Canada, on the 31st December, 1907. Presented 24th June, 1908, by Hon. L. P. Brodeur...*Printed for both distribution and sessional papers.*

CONTENTS OF VOLUME 11.

21c. Report on British and Continental Ports, with a view to the development of the port of Montreal and Canadian transportation.
Printed for both distribution and sessional papers.

22. Report of the Department of Marine and Fisheries (Fisheries) for 1907. Presented 18th December, 1907, by Hon. L. P. Brodeur.
Printed for both distribution and sessional papers.

23. Report of the Harbour Commissioners. &c.
Printed for both distribution and sessional papers.

23a. Report of the Chairman of the Board of Steamboat Inspection, 1907. Presented 27th February, 1908, by Hon. L. P. Brodeur.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 12.

24. Report of the Postmaster General, for the nine months ended 31st March, 1907. Presented 3rd December, 1907, by Sir Wilfrid Laurier.
Printed for both distribution and sessional papers.

25. Report of the Department of the Interior, for the fiscal period from 1st July, 1906, to 31st March, 1907. Presented 29th November, 1907, by Hon. F. Oliver.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 13.

25*a*. (1906) Report of the Chief Astronomer for the year ended 30th June, 1903. Presented 17th December, 1907, by Hon. F. Oliver...*Printed for both distribution and sessional papers.*

25*a*. (1907) Report of the Chief Astronomer for the nine months ending 31st March, 1907.
Printed for both distribution and sessional papers.

25*b*. Annual Report of the Topographical Surveys Branch (Department of the Interior) 1906-7. Presented 8th June, 1908, by Hon. F. Oliver.
Printed for both distribution and sessional papers.

25*c*. Report of the Commissioner of the Yukon Territory, for the year ended 31st March, 1908.... .. ..*Printed for both distribution and sessional papers.*

25*d*. Correspondence and papers relating to Seed Grain in Saskatchewan and Alberta. Presented 18th July, 1908, by Hon. F. Oliver.
Printed for both distribution and sessional papers.

26. Summary Report of the Department of Mines (Geological Survey), for the calendar year 1907. Presented 16th January, 1908, by Hon. W. Templeman.
Printed for both distribution and sessional papers.

26*a*. Summary Report of the Mines Branch of the Department of Mines, for the fiscal year 1907-8. Presented 17th July, 1908, by Hon. W. Templeman.
Printed for both distribution and sessional papers.

26*b*. Annual Report on the Mineral Production in Canada, during the calendar year 1906.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 14.

27. Report of the Department of Indian Affairs, for the year ended 31st March, 1907. Presented 29th November, 1907, by Hon. F. Oliver.
Printed for both distribution and sessional papers.

28. Report of the Royal Northwest Mounted Police, 1907. Presented 29th January, 1908, by Sir Wilfrid Laurier... .. ..*Printed for both distribution and sessional papers.*

29. Report of the Secretary of State of Canada, for the year 1907.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 15.

29*a*. Report of the Royal Commission on the Civil Service, with appendices and evidence taken before the Commissioners. Presented 26th March, 1908, by Hon. W. S. Fielding; also Analytical Index of evidence and memorials.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 16.

29*a*. Report of the Royal Commission on the Civil Service—*Continued.*

30. Civil Service List of Canada, 1907. Presented 3rd December, 1907, by Sir Wilfrid Laurier.
Printed for both distribution and sessional papers.

CONTENTS OF VOLUME 17.

31. Report of the Board of Civil Service Examiners, for the year ended 31st December, 1907. Presented 8th May, 1908, by Hon. S. A. Fisher.
Printed for both distribution and sessional papers.

32. Annual Report of the Department of Public Printing and Stationery, 1907. Pesented 11th May, 1908, by Hon. S. A. Fisher... ..*Printed for both distribution and sessional papers.*

33. Report of the Joint Librarians of Parliament for the year 1907. Presented 28th November, 1907, by the Hon. the Speaker... .. ..*Printed for sessional papers.*

CONTENTS OF VOLUME 17—*Continued.*

34. Report of the Minister of Justice as to Penitentiaries of Canada, for the nine months ended 31st March, 1907. Presented 4th December, 1907, by Hon. J. Bureau.
Printed for both distribution and sessional papers.

35. Annual Report of the Militia Council of Canada, 1907. (Interim Report presented 6th March, 1908.).. .. ..*Printed for both distribution and sessional papers.*

36. Report of the Department of Labour, for the nine months ended 31st March, 1907. Presented 18th December, 1907, by Sir Wilfrid Laurier.
Printed for both distribution and sessional papers.

36*a*. Report of W. L. Mackenzie King, C.M.G., Deputy Minister of Labour, on his mission to England to confer with the British authorities on the subject of immigration to Canada from the Orient, and immigration from India, in particular
Printed for both distribution and sessional papers.

36*b*. Report by W. L. Mackenzie King, C.M.G., Deputy Minister of Labour, on the need for the suppression of the opium traffic in Canada. Presented 3rd July, 1908, by Hon. R. Lemieux.. .. ..*Printed for both distribution and sessional papers.*

36*c*. Return to an address of the Senate, dated 16th July, for all correspondence, reports, memorials and protests forwarded to the Government in connection with the opium trade in Canada, whether asking for the suppression of said trade or otherwise. Presented 18th July, 1908.—*Hon. Sir Mackenzie Bowell*... .. ..*Not printed.*

37. Minutes of proceedings of the Board of Internal Economy of the House of Commons, pursuant to Rule of the House, number 9. Presented 2nd December, 1907, by the Hon. The Speaker.. .. ..*Not printed.*

37*a*. Return to an order of the House of Commons, dated 10th February, 1908. Minutes of proceedings of the Board of Internal Economy of the House of Commons from 1st January, 1902, to 1st January, 1906. Presented 6th March, 1908.—*Mr. Roche (Marquette).*
Not printed.

38. A copy of the new rules of the Supreme Court of Canada, promulgated on the 19th day of June, 1907. Presented 28th November, 1907, by the Hon. The Speaker.....*Not printed.*

38*a*. Rules and orders of the Supreme Court of Judicature for Ontario, passed on the 27th March, 1908, under the power conferred by the Criminal Code. Presented 12th May, 1908, by Hon. A. B. Aylesworth.. .. ..*Not printed.*

39. Return to an order of the House of Commons, dated 6th July, 1908, showing the length of the National Transcontinental Railway from Moncton, New Brunswick, to Prince Rupert, in the province of British Columbia, and the estimated cost of the same. Presented 6th July, 1908.—*Hon. G. P. Graham*.. .. ..

CONTENTS OF VOLUME 17—*Continued.*

Transcontinental Railway between the city of Winnipeg, in the province of Manitoba, and the city of Moncton, in the province of New Brunswick; that such copy or return shall contain (1) signatures attached to the tenders; (2) the total amount of each tender as "moneyed out" by the said commission; (3) the quantity of each class or kind of material as used by the said commission in figuring out the cost; (4) the price per unit of prices submitted by those who responded to the invitation for tenders; and (5) the total cost of each item in the schedule, which, added together, gives the grand total cost of each undertaking tendered for. Presented 24th January, 1908.—*Mr. Taylor*.. .. .. .

CONTENTS OF VOLUME 17—*Continued.*

39*j*. Return to an order of the Senate, dated 9th April, 1908, giving a list of all railways in Canada which are not under the control or jurisdiction of the Board of Railway Commissioners; and stating in each case the reason why the railway is not controlled by the commission. Presented 12th May, 1908.—*Hon. Mr. McKay (Truro)....Not printed.*

39*k*. Return (in part) to an order of the Senate, dated 27th March, 1908, showing, separately, the highway crossings at rail level on all railways, except railways under construction, within the jurisdiction of the Railway Commission in respect of which highway crossings, protection has been ordered by the board since its organization, said return to give the character of the protection ordered in each case, the name of the railway company, the local designation of each highway crossing, and the county and province in which it is situated, and the date of the order and regulation in respect thereof; also a similar return giving the highway crossings ordered to be protected by the proper authority in each case on all railways not under the control of the board, including the Intercolonial Railway, and including orders made regarding railways under construction; also a similar return respecting all highway crossings, which had orders and regulations in respect to them in force, on the 1st day of February, 1904. Presented 18th July, 1908.—*Hon. Mr. Ferguson.. .. ..Not printed.*

39*l*. Supplementary Return to No. 39*k*. Presented 4th June, 1908... .. ..*Not printed.*

40. Ordinances of the Yukon Territory passed by the Yukon Council in the year 1907. Presented 3rd December, 1907, by Sir Wilfrid Laurier.. .. ..*Not printed.*

41. General Orders issued to the militia between 2nd November, 1906, and 1st November, 1907. Presented 9th December, 1907, by Sir Frederick Borden.. .. ..*Not printed.*

41*a*. Dress Regulations for the Canadian militia, 1907. Presented 9th December, 1907, by Sir Frederick Borden.. .. ..*Not printed.*

42. Ross Rifle Hand-book, 1907. Presented 9th December, 1907, by Sir Frederick Borden. *Not printed.*

43. Return under chapter 125 (R.S.C.), 1906, intituled: "An Act respecting Trades Unions," submitted to Parliament in accordance with section 33 of the said Act. Presented 9th December, 1907, by Sir Wilfrid Laurier.. .. ..*Not printed.*

44. A detailed statement of all bonds or securities registered in the Department of the Secretary of State of Canada, since last return, 4th December, 1906, submitted to the Parliament of Canada under section 32, chapter 19, of the Revised Statutes of Canada, 1906. Presented 9th December, 1907, by Sir Wilfrid Laurier.. .. ..*Not printed.*

45. Return (in so far as the Department of the Interior is concerned) of copies of all orders in council, plans, papers, and correspondence which are required to be presented to the House of Commons, under a resolution passed on 20th February, 1882, since the date of the last return, under such resolution. Presented 11th December, 1907, by Hon. F. Oliver... .. ..*Not printed.*

46. Return of orders in council which have been published in the *Canada Gazette* and in the *British Columbia Gazette*, between 1st December, 1906, and 1st December, 1907, in accordance with provisions of subsection (*d*) of section 38 of the regulations for the survey, administration, disposal and management of Dominion lands within the 40-mile railway belt in the province of British Columbia. Presented 11th December, 1907, by Hon. F. Oliver.. .. ..*Not printed.*

47. Return of orders in council which have been published in the *Canada Gazette* between 1st December, 1906, and 1st December, 1907, in accordance with the provisions of section 8 of chapter 55 of the Revised Statutes of Canada, 1906. Presented 11th December, 1907, by Hon. F. Oliver.. .. ..*Not printed.*

48. Statement of expenditure on account of miscellaneous unforeseen expenses from the 1st April, 1907, to the 28th November, 1907, in accordance with the Appropriation Act of 1907. Presented 11th December, 1907, by Hon. W. S. Fielding.. . . .. ..*Not printed.*

CONTENTS OF VOLUME 17—*Continued.*

49. Statement in pursuance of section 17 of the Civil Service Insurance Act, for the nine months ending 31st March, 1907. Presented 11th December, 1907, by Hon. W. S. Fielding.. .. .. .

CONTENTS OF VOLUME 17—*Continued.*

Leonard Wiley, or to the claim of Louise F. Wiley, or of her infant daughter, against the government or against Frederick T. Congdon as public administrator of the Yukon Territory, or otherwise as an official of the government, or to any charges against the said Frederick T. Congdon as public administrator or otherwise as an official or employee of this government; excluding therefrom, however, any papers relating to the subjects which may be included in return ordered on the 13th instant, on motion of the honourable member for North Toronto. Presented 24th February, 1908.—*Mr. Foster.*
Not printed.

55*b*. Return to an address of the House of Commons, dated 29th January, 1908, for a copy of all orders in council, correspondence, evidence, memoranda and other documents and papers of every description, relating to or touching the conduct of all persons who have acted as public administrator in the Yukon Territory, or who have had charge or control by reason of their official position, of the estate of deceased persons in the Yukon Territory. And a copy of all such documents and papers aforesaid as set forth and describe the action, if any, of the government in respect of any claims, charges or proposed proceedings against any such official in respect of his duties, acts or dealings as public administrator. Presented 24th February, 1908.—*Mr. Lennox....Not printed.*

55*c*. Return to an order of the House of Commons, dated 13th January, 1908, for a copy of all telegrams, affidavits, papers sent by and all correspondence had with Rev. John Pringle, presently of the Yukon, in connection with the condition of public matters therein and with public officials thereof, and especially in reference to one Frederick Tennyson Congdon, at one time commissioner of the Yukon, and one Girouard, registrar, and one Lithgow, controller and member of the Yukon Council and in particular letters sent by Rev. John Pringle, on or about January, 1902, and in or about January, 1905, and on or about 31st July, 1907, to the premier of Canada, and other ministers, detailing the condition of public matters in the Yukon and the replies thereto. Also showing what action, if any, was taken by the government in relation to the matters dealt with therein and the reports of any commissioner appointed to investigate the charges or any part of them. Presented 2nd March, 1908.—*Mr. Foster.. .. ..Not printed.*

55*d*. Return to an order of the House of Commons, dated 20th January, 1908 for a copy of all correspondence relating to the morality of the Yukon. Presented 11th March, 1908.—*Mr. Thompson.. .. ..Not printed.*

55*e*. Return to an order of the House of Commons, dated 10th February, 1908, showing the parties to whom were made the original grants from the Crown of the lands comprised within the limits of the town of Whitehorse, Yukon Territory, and any assignments made thereof, with names of parties, dates, and consideration therefor. Presented 16th March, 1908.—*Mr. Foster.. .. ..Not printed.*

55*f*. Supplementary return to an order of the House of Commons, dated 13th January, 1908, for a copy of all telegrams, affidavits, papers sent by and all correspondence had with Reverend John Pringle, presently of the Yukon, in connection with the condition of public matters therein and with public officials thereof, and especially in reference to one Frederick Tennyson Congdon, at one time commissioner of the Yukon, and one Girouard, registrar, and one Lithgow, controller and member of the Yukon Council; and in particular letters sent by Reverend John Pringle, on or about January, 1902, and in or about January, 1905, and on or about 31st July, 1907, to the Premier of Canada and other ministers, detailing the condition of public matters in the Yukon and the replies thereto; also showing what action, if any, was taken by the government in relation to the matters dealt with therein and the reports of any commissioner appointed to investigate the charges or any part of them. Presented 7th April, 1908.—*Mr. Foster.. .. ..Not printed.*

CONTENTS OF VOLUME 17—*Concluded.*

55*g*. Return to an order of the House of Commons, dated 18th February, 1907, for a copy of all letters, memorials, telegrams, petitions, resolutions and other communications, documents and papers from any person or persons in the Yukon to the Prime Minister or to the government, or any member or official of the government, respecting the official acts or conduct of Mr. W. W. B. McInnes as commissioner of the Yukon; including any petition asking for the removal of Mr. McInnes from his position as commissioner. Presented 7th April, 1908—*Mr. White*. .. ..*Not printed.*

55*h*. Return to an order of the House of Commons, dated 13th January, 1908, for a copy of the report made by Mr. Beddoe upon the condition of the books, accounts, &c., of the financial administration of the Yukon, and especially with reference to the condition in the public administrator's office. Presented 21st April, 1908.—*Mr Foster.*

Not printed.

55*i*. Return to an address of the House of Commons, dated 30th March, 1908, for a copy of all orders in council, reports, correspondence, documents, and papers relating to the appointment of Mr. W. H. P. Clement as legal adviser to the council of the Yukon Territory, or as public administrator in the Yukon Territory, or to any other office of emolument in the Yukon Territory, or relating to the resignation of the said W. H. P. Clement from any such office, or relating to the circumstances under which and reasons for which the said W. H. P. Clement ceased to act as such legal adviser, public administrator or in any other such capacity. Presented 7th May, 1908.—*Mr. Sproule.*

Not printed.

56. Statement of expenditure as to bounty to deep-sea fishermen, for the year 1906-7. Presented 18th December, 1907, by Hon. L. P. Brodeur.. .. ..*Not printed.*

56*a*. Return to an order of the House of Commons, dated 13th January, 1908, showing the names and residences of all fishermen in the county of Cape Breton to whom fishing bounties were paid between 31st December, 1905, and 1st January, 1908, together with a statement of the amount paid to each person, the date on which it was paid, and the name of the officer or person by whom the sum was paid. Presented 11th February, 1908.—*Mr. Borden (Carleton)*... .. ..*Not printed.*

56*b*. Supplementary return to No. 56*a*. Presented 13th July, 1908.. .. ..*Not printed.*

57. Correspondence and instructions with regard to the Lord's Day Act in its application to the Yukon Territory. Presented 18th December, 1907, by Hon. A. B. Aylesworth.

Not printed.

CONTENTS OF VOLUME 18.

58. Minutes of Proceedings of the Colonial Conference held at the Colonial Office, Downing Street, London, from the 15th April to the 14th May, 1907. Presented 22nd May, 1908, by Sir Wilfrid Laurier.... .. ..*Printed for both distribution and sessional papers.*

59. Report of the Royal Commission on the Grain Trade of Canada. Presented 8th January, 1908, by Hon. F. Oliver.... .. ..*Printed for both distribution and sessional papers.*

60. Return to an order of the House of Commons, dated 18th December, 1907, for a copy of the report of the Honourable Justice James Henry Madden, appointed by order in council, 15th May, 1907, to investigate and report upon the matter of arrears for rentals on certain leases at Dunnville, Welland Canal feeder. Presented 9th January, 1908.—*Mr. Lalor*... .. ..*Not printed.*

61. Return to an address of the House of Commons, dated 11th December, 1907, for a copy of all correspondence, petitions, statements, papers, orders in council, and proclamations respecting the setting out of limits for prohibition of the sale of liquors along the line of the Grand Trunk Pacific under the Public Works Construction Act. Presented 9th January, 1908.—*Mr. Foster*.... .. ..*Not printed.*

61*a*. Supplementary return to No. 61. Presented 27th January, 1908.. .. ..*Not printed.*

CONTENTS OF VOLUME 18—*Continued.*

62. Return to an order of the House of Commons, dated 11th December, 1907, for a copy of all correspondence, documents, papers, memoranda, and reports, relating to the retirement, resignation, or dismissal of Mr. Hodgins, C.E., from the service of the National Transcontinental Railway Commission, and the grounds or reasons therefor. Presented 9th January, 1908.—*Mr. Borden (Carleton)*.. .. ..*Not printed.*

62*a*. Return to an order of the House of Commons, dated 18th December, 1907, showing what changes, if any, have been made in the National Transcontinental Railway Commission's engineering staff during the current calendar year. Presented 9th January, 1908.—*Mr. Macdonell*.. .. . .*Not printed.*

62*b*. Return to an order of the House of Commons, dated 12th December, 1907, showing : 1. The estimated quantities used by the Transcontinental Railway Commission for arriving at the moneyed values of the tenders for the construction of the 50 miles, more or less, from Moncton westerly; for the construction of 62 miles, more or less, from Grand Falls westerly; from the south side of the St. Lawrence river, easterly 150 miles; for the 45 miles more or less westerly from near La Tuque; and for the 150 miles easterly from near Abitibi, known as the Abitibi section. 2. The various prices which each tenderer placed opposite the several items in the schedule or form of tender. 3. The total amount so ascertained of each tender. Presented 9th January, 1908.—*Mr. Schell (Glengarry). See also 39b*.. .. ..*Not printed.*

63. Return to an address of the House of Commons, dated 11th December, 1907, for a copy of all orders in council, correspondence, reports, opinions of the Department of Justice, memoranda, papers and documents; also of all plans or route maps relating to the proposed new eastern entrance of the Grand Trunk Railway Company into the city of Toronto. Presented 9th January, 1908.—*Mr. Macdonell*.. .. ..*Not printed.*

64. Return to an order of the House of Commons, dated 11th December, 1907, for a copy of all writs, forms and instructions issued and used in and for the purposes of the several elections for Dominion constituencies in the year 1907. Presented 9th January, 1908.—*Mr. Barker*.. .. ..*Not printed.*

65. Return to an address of the House of Commons, dated 11th December, 1907, for a copy of the order in council appointing Honourable J. A. Ouimet as judge of the Court of the King's Bench, as well as a copy of all correspondence, reports, medical certificates and order in council concerning his being pensioned. Presented 9th January, 1908.—*Mr. Lanctot (Laprairie-Napierville)*.. .. ..*Not printed.*

66. The Canada Year Book, 1906. Presented 10th January, 1908, by Hon. S. A. Fisher.
Printed separately.

67. Report of the Commissioner, Dominion Police Force, for the year 1907. Presented 13th January, 1908, by Hon. A. B. Aylesworth.. .. ..*Not printed.*

68. Return to an order of the House of Commons, dated 11th December, 1907, showing: 1. The number of officials of the government, civil or military, or officers of the active militia who perform services in any way connected with the manufacture of rifles for the government by the Ross Rifle Company. 2. Their names, ranks, and duties, and the amount of their individual salary or remuneration. 3. The total amount, (apart from contract cost of rifle), or expenditure by the government with the Ross Rifle Company, including any bonus, loans, inspections, cost of testing, commissions, or expenditure of any kind, with the individual amounts. Presented 16th January, 1908.—*Mr. Worthington*.. .. ..*Not printed.*

68*a*. Return to an order of the House of Commons, dated 11th December, 1907, showing reports of commissions, boards of inquiry, inspections, reports of industrial officers, to the government or any member thereof, including reports from the comptroller, commissioner, or any officer, or member of the Northwest Mounted Police, the Dominion Rifle Association, or any member thereof, or any rifle association or club, or any

CONTENTS OF VOLUME 18—*Continued.*

member thereof, or to the commandant, or any member of the Bisley team, regarding the efficiency of the Ross rifle, to date. Presented 9th April, 1908.—*Mr. Worthington.*
Not printed.

68*b*. Return to an order of the House of Commons, dated 11th March, 1908, for a copy of all correspondence between the government or any department thereof, and the Ross Rifle Company, or any representative thereof, or between the government and any bank or other institution which has made advances under the contract between the government and the said company, or any representative of such bank or institution, relating to the accounts and financial or other affairs of the Ross Rifle Company, including any letters or correspondence from any official of the Bank of Montreal to the Auditor General. Presented 9th April, 1908.—*Mr. Worthington*.. .. ..*Not printed.*

68*c*. Return to an address of the House of Commons, dated 18th March, 1908, for a copy of all correspondence, reports, communications and other papers and documents of every kind and description not already brought down, relative to the rifle known as the Ross rifle, or to the contract between the government and any person or corporation with respect to the said rifle, or to the value or efficiency thereof, or to any alleged defects therein; also a copy of all letters, telegrams, despatches, reports, and other communications of every kind from the British government or any member or official thereof, or from the War Office, or Secretary of State for War, or any officer or official or person employed by or in the service of the British government, to the Governor General of Canada, or to the government of Canada, or to the Minister of Militia, or to any officer or official or person in the public service of Canada, relative to the said rifle, or to the value or efficiency of the said rifle or any defects therein, or any matter or thing connected therewith. Presented 9th April, 1908.—*Mr. Worthington.*
Not printed

68*d*. Return to an address of the House of Commons, dated 11th December, 1907, for a copy of all contracts between the Ross Rifle Company and the government, or the Department of Militia, for the supply of rifles, ammunition and other articles, and all orders in council, correspondence, reports ,documents and papers, relating to such contracts, and the subject-matter thereof, and to the operations of the company, and to its dealings with the government, or any of the departments, including the Department of Customs, and the Bank of Montreal, or any banking institutions. Presented 9th April, 1908.—*Mr. Worthington*.. .. ..*Not printed.*

69. Return of lands sold by the Canadian Pacific Railway Company, from the 1st October, 1906, to the 1st October, 1907. Presented 13th January, 1908, by Hon. F. Oliver.
Not printed.

70. Report of the Ottawa Improvement Commission for the nine months ended the 31st March, 1907. Presented 13th January, 1908, by Hon. W. S. Fielding.
Printed for sessional papers.

71. Return to an order of the House of Commons, dated 11th December, 1907, showing : 1. How much money has been expended to date on the Royal Mint, for construction and equipment, respectively. 2. The sums required to complete on both accounts. 3. The officers and employees, and at what yearly salaries, are required to man the institution. 4. The face value of copper and silver and gold coinage obtained by the government per year for the last ten years, and what it has cost the government therefor. 5. The total profit on coinage in the ten years. 6. The amount of coinage it is in contemplation to issue in 1908, and in what denominations. 7. Who is to make the purchases and fix the price of bullion necessary for the use of the Mint. 8. Upon what system the officers and employees of the Mint are appointed, promoted and dismissed. Presented 13th January, 1908.—*Mr. Foster*.. .. ..*Not printed.*

CONTENTS OF VOLUME 18—*Continued.*

72. Supplementary return to an address of the House of Commons, dated 10th December, 1906, for a copy of all orders in council, correspondence, and all other papers, relating to the Standard Chemical Company (Limited), or Pevelan & Co., in its dealings with the Customs and Inland Revenue Departments from the date of the incorporation of the said company to the present date. Presented 16th January, 1908.—*Mr. Robitaille.*
Not printed.

73. Return to an order of the House of Commons, dated 11th December, 1907 showing: 1. All promotions that have been made to the rank of colonel in the active militia during the past year, with names. 2. The nature of service, merit or seniority justifying such promotions. 3. The record of war services of such officers. 4. Previous to the gazetting of such promotion the positions held by such officers on the seniority list of the colonels. 5. The number of lieut.-colonels who were outranked or superseded by such promotions, with their names and services. Presented 17th January, 1908.—*Mr. Worthington*.. .. .. .

CONTENTS OF VOLUME 18—*Continued.*

75. Return to address of the House of Commons, dated 11th December, 1907, for a copy of all correspondence, instructions or communications sent by the Government of Canada, through the Secretary of State or otherwise, to Sir Henri Joly de Lotbinière, as Lieutenant Governor of British Columbia, during the years 1905 and 1906, respectively. Presented 21st January, 1908.—*Mr. Borden (Carleton)*... .. ..*Not printed.*

76. Copy of an order in council regarding sale of a portion of Major's Hill Park, Ottawa, to the Grand Trunk Railway Company as a site for a hotel. Presented 21st January, 1908, by Hon. W. Pugsley.. .. ..*Not printed.*

77. Return to an order of the House of Commons, dated 16th December, 1907, for a copy of any declarations or affidavits made by Robert Cruickshank, or other persons in the Regina Lands district, or any other complaints in regard to alleged improper or unauthorized charges by individuals, whether in the service of the Government or not, for locating settlers on homesteads, or obtaining for them entries for homesteads, by cancellation or otherwise, together with all correspondence, reports, or other papers on the subject; also all communications, reports, correspondence, or other papers between the Department of the Interior and any of its officials and any person or persons in regard to homestead entries, cancellations, protections, inspectors' reports, &c., for the s.w. ¼ sec. 16 and the n.w. ¼ sec. 20 and the n.w. and s.w. ¼ sec 36, all in tp 14, r. 9, w. 2nd M. Presented 23rd January, 1908.—*Mr. Lake*.... .. ..*Not printed.*

78. Return to an order of the House of Commons, dated 11th December, 1907, showing how many applications were refused for permission, as granted by order in council passed on 16th May, 1906, for saw-mill owners to cut timber. Presented 23rd January, 1908. —*Mr. Roche (Marquette)*... .. ..*Not printed.*

79. Return to an order of the House of Commons, dated 11th February, 1907, showing the total expenditure each constituency, as defined prior to last Redistribution Act, the the years 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, and 1906, for: *(a)* Harbours and rivers, including dredging, wharfs, docks, breakwaters, piers, or other improvements and repairs. *(b)* For public buildings and lands, including repairs, extensions, &c. *(c)* Maintenance and caretakers, including fuel, lights, &c. *(d)* Expenditure in connection with Intercolonial Railway, including purchase of lands, erection of buildings, repairs, &c., and improvements, and the place where spent. Presented 29th January, 1908.—*Mr. Sproule*.. .. ..*Not printed.*

80. Return to an order of the House of Commons, dated 11th December, 1907, showing a summary of stock, implements, chattels, grain, hay, roots and all other kinds of fodder, with their value, for the years ending 1st December, 1906 and 1907; also the amount paid for all kinds of live stock, their kind and number, the amount paid for all kinds of feed, giving the kind, the amount of all kinds of product sold, and their kind; the amount paid for all kinds of grain and seed for distribution for the same years, on the Central Experimental Farm, Ottawa. Presented 23rd January, 1908.--*Mr. Jackson (Elgin)*.. .. ..*Not printed.*

81. Return to an order of the House of Commons, dated 11th December, 1907, showing the number of immigrants secured and located by Mr. N. B. Miller, of the town of Napanee, in the county of Lennox and Addington, the names of such immigrant, his age, the names of the respective parties with whom they were located, also the township in which such party resides; also the amount of money received by the said N. B. Miller from the government for his services in salary, commission, or both; also the amount of moneys received by the said N. B. Miller, respectively, from residents in the said county of Lennox and Addington for his services in securing the aforesaid immigrants. Presented 23rd January, 1908.—*Mr. Wilson (Lennox and Addington)*.. .. ..*Not printed.*

81*a*. Return to an order of the House of Commons, dated 11th December, 1907, showing the number of immigrants secured and located by Mr. M. C. Dunne, of Yarker, in the county of Lennox and Addington, the names of each such immigrant, his age, the names

CONTENTS OF VOLUME 18—*Continued.*

of the respective parties with whom they are located, also the township in which such party resides; also the amount of money received by the said M. C. Dunne from the government for his services in salary, commission, or both; also the amount of moneys received by the said M. C. Dunne, respectively, from residents in the said county of Lennox and Addington for his services in securing the aforesaid immigrants. Presented 23rd January, 1908.—*Mr. Wilson (Lennox and Addington)*.. .. .. ..*Not printed.*

81*b*. Return to an order of the House of Commons, dated 13th January, 1908, showing list of the names of immigration agents appointed by the government in each county of the province of Ontario, the county in which each such agent is employed, the number of immigrants placed by each such agent, and the amounts paid to each such agent for his services and expenses. Presented 30th January, 1908.—*Mr. Clements.Not printed.*

81*c*. Return to an order of the House of Commons, dated 11th December, 1907, for a copy of all reports received by the government from each of the special immigration agents sent to Great Britain and the continent of Europe, for the fiscal year ending 31st March, 1907. Presented 30th January, 1908.—*Mr. Wilson (Lennox and Addington).* *Not printed.*

81*d*. Return to an order of the House of Commons, dated 16th December, 1907, showing the number of immigrants who reached and settled in Canada during the fiscal years of 1905-6 and 1906-7, and from what countries they came. Presented 11th February, 1908. —*Mr. Paquet*.. .. ..*Not printed.*

81*e*. Return to an order of the House of Commons, dated 22nd January, 1908, for a copy of all correspondence between the Department of the Interior and James S. Waugh, immigration distribution agent, subsequent to 1st December, 1907. Presented 11th February, 1908.—*Mr. Gordon*.. .. ..*Not printed.*

81*f*. Return to an order of the House of Commons, dated 3rd February, 1908, showing what special immigration agents the Government of Canada has in the British Islands; their respective names, and from what parts of Canada they come; the arrangements made by the Government with the said agent or agents as to salary and expenses; the date of their respective appointments, and at what time they left this country to take up their work. Presented 11th February, 1908.—*Mr. Wilson (Lennox and Addington).* *Not printed.*

81*g*. Return to an Address of the House of Commons, dated 29th January, 1908, for a copy of all orders in council now in force with respect to immigration from every country from which immigrants come to Canada; also a copy of all circulars in force at the present time with reference to immigration. Presented 13th February, 1908.—*Mr. Wilson (Lennox and Addington)*.. .. ..*Not printed.*

81*h*. Return to an order of the House of Commons, dated 20th January, 1908, for a copy of all certificates by farmers resident in the riding of West Kent, and returned to the department by emigration agents for the said riding, and on certificates such agents were paid for placing emigrants with each farmer, giving the names of each emigrant and of each farmer such were placed with, giving the total amount received by each agent up to the present time Presented 3rd March, 1908.—*Mr. Clements*...*Not printed.*

81*i*. Return to an order of the House of Commons, dated 11th March, 1908, for a copy of all certificates by A. G. McDonald, immigration agent for Prince Edward County, Ontario, claiming payment for immigrants by him alleged to have been placed with farmers or other employers; also, a copy of all certificates or communications by such farmers or other employers received by the Department of the Interior relating to immigrants so claimed as placed by said A. G. McDonald, giving in each case the name and post office address of the immigrant and of the farmer or the employer. Presented 13th April, 1908.—*Mr. Alcorn*.. .. ..*Not printed.*

7461—3½

CONTENTS OF VOLUME 18—*Continued.*

81*j*. Return to an order of the House of Commons, dated 23rd March, 1908, showing the expenditure of the Government for food, clothing and other maintenance for immigrants after landing in Canada for the years 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, to 1st March. Presented 30th April, 1908.—*Mr. Schaffner*.. .. ..*Not printed.*

81*k*. Report of E. Blake Robertson, assistant superintendent of immigration, respecting Joseph Bernstein, Halifax. Presented 27th May, 1908, by Hon. F. Oliver...*Not printed.*

82. Return to an order of the House of Commons, dated 18th December, 1907, showing the total amount paid by this Government each year, during the past five years, towards mail subsidies to steamships; the names of the countries served, the names of steamers and contractors, and the steamship subventions. Presented 28th January, 1908.—*Mr. Armstrong*.. .. ..*Printed for sessional papers.*

83. Return to an order of the House of Commons, dated 13th January, 1908, for a copy of the lease, conditions, &c., passed between the Government of Canada and a company for the use of the Beauharnois Canal. Presented 24th January, 1908.—*Mr. Bergeron.*
Not printed.

84. Copies of a letter and telegrams between the Lieutenant Governor of British Columbia and the Honourable the Secretary of State for Canada, on the subject of the disallowance of a Bill of the Legislature of British Columbia, intituled: "An Act to regulate immigration into British Columbia." Presented 24th January, 1908, by Sir Wilfrid Laurier.. .. ..*Not printed.*

85. Return to an order of the House of Commons, dated 8th January, 1908, for a copy of all correspondence between the Department of Justice, or any department of the Government, and Mr. Frederick Fraser Forbes, now a district judge in the province of Saskatchewan, or any other person or persons, in reference to the personal or professional status or character of Mr. Forbes, or his appointment as a judge as above-mentioned, and of all writings and documents of any kind in reference to the foregoing matter. Presented 28th January, 1908.—*Mr. Taylor*.. .. ..*Not printed.*

86. Return to an order of the House of Commons, dated 15th January, 1908, showing the number of applications made to the Board of Railway Commissioners for the privilege of crossing railway tracks with telephone and telegraph wires and with water mains each, over the said period from 1st February, 1904, to the 1st January, 1908; the total number of applications granted over said period; the total number of applications refused; the date of each application; the date each application was granted; the length of time from the application to the granting of same; and what time should elapse before the board should give its decision. Presented 27th January, 1908.—*Mr. Barr.*
Not printed.

87. Return to an order of the House of Commons, dated 16th December, 1907, showing, in respect of all grants of right to divert water and construct ditches made under the provisions of the Yukon Placer Mining Act, 1906, the number of the claim, name and address of the grantee, date of issue, length of term, source of water, quantity that may be diverted, estimated expenditure within one year, time limit for construction, sum paid for the privilege and the name and address of present holder, if rights have been transferred. Presented 30th January, 1908.—*Mr. Boyce*.. .. ..*Not printed.*

88. Return to an order of the House of Commons, dated 11th December, 1907, showing the timber lands sold or leased by the Department of the Interior subsequent to the date of those included in Sessional Paper, No. 167*a*, brought down to the House on the 9th of April, 1907; the description and area of such lands, the applications made therefor, the notice of advertisement for sale or tender, the tenders received, the amount of each tender, the tenders accepted, the name of the person or company to whom each lot was sold or leased, and the name and address of each person or company to whom any of such leases have been transferred. Presented 30th January, 1908.—*Mr. Ames.*
Not printed.

CONTENTS OF VOLUME 18—*Continued.*

88*a*. Return to an order of the House of Commons, dated 11th December, 1907, showing, in respect of timber berth number 1279, all applications, correspondence, reports, advertisements, tenders, leases, transfers, or memoranda of any description. Presented 3rd February, 1908.—*Mr. Ames*.... .. ..*Not printed.*

88*b*. Return to an order of the House of Commons, dated 18th December, 1907, showing, in respect of timber berths numbers 1031, 1118, 1097 and 1098, all bonuses, rentals, or dues, paid to date by the lessees or other assigns to the Government, together with a copy of all applications, correspondence, reports, advertisements, tenders, leases, transfers or memoranda of any description in connection therewith. Presented 18th February, 1908. —*Mr. White*.. .. ..*Not printed.*

88*c*. Return to an order of the House of Commons, dated 18th December, 1907, showing, in respect of timber berths numbers 1050, 1265, 1267, 1274 and 1275, all bonuses, rentals or dues paid to date by the lessees or other assigns to the Government, together with a copy of all applications, correspondence, reports, advertisements, tenders, leases, transfers or memoranda of any description in connection therewith. Presented 18th Febru ary, 1908.—*Mr. Boyce*... .. ..*Not printed.*

88*d*. Return to an order of the House of Commons, dated 12th February, 1908, for the production of all the original applications and tenders filed in the Department of the Interior in respect of timber berths numbers 1050, 1265, 1267, 1274 and 1275, and that the names be laid upon the Table of the House, said papers not to be part of the archives of this House, but to be returned by the Clerk to the Department of the Interior after inspection. Presented 24th February, 1908.—*Mr. Boyce*.....*Not printed.*

88*e*. Return to an order of the House of Commons, dated 12th February, 1908, for the production of all the original applications and tenders filed in the Department of the Interior in respect of timber berths numbers 1031, 1118, 1119, 1097 and 1098, and that the same be laid upon the Table of the House, said papers not to be part of the archives of this House, but to be returned by the Clerk to the Department of the Interior after inspection. Presented 24th February, 1908.—*Mr. White*.... .. ..*Not printed.*

88*f*. Return to an order of the House of Commons, dated 12th February, 1908, for the production of all the original applications and tenders filed in the Department of the Interior in respect of timber berths numbers 1048, 1049, 1122 and 1168, and that the same be laid upon the Table of the House, said papers not to be part of the archives of this House, but to be returned by the Clerk to the Department of the Interior after inspection. Presented 24th February, 1908.—*Mr. Boyce*.. .. ..*Not printed.*

88*g*. Return to an order of the House of Commons, dated 10th February, 1908, that there be laid on the Table for inspection the original applications and tenders in respect of timber berths numbers 1220, 1226, 1238 and 1272, said papers not to be part of the archives of this House, but to be returned by the Clerk to the Department of the Interior after inspection. Presented 24th February, 1908.—*Mr. Lake*.... ..*Not printed.*

88*h*. Return to an order of the House of Commons, dated 18th December, 1907, showing, in respect of timber berths numbers 1048, 1049, 1122 and 1168, all bonuses, rentals, or dues paid to date by the lessees or other assigns to the Government, together with a copy of all applications, correspondence, reports, advertisements, tenders, leases, transfers and memoranda of any description in connection therewith. Presented 9th March, 1908.— *Mr. Boyce*.. .. ..*Not printed*

88*i*. Return to an order of the House of Commons, dated 18th December, 1907, showing, in respect of all timber berths at present under license or authorized to be licensed within the provinces of Manitoba, Saskatchewan, Alberta and the Northwest Territories, (*a*) number or designation of each berth; (*b*) number of license for 1907-8; (*c*) area of berth in square miles; (*d*) name and address of present license holder; (*e*) name and address of original applicant, with date of his application; (*f*) date of issue from Ottawa of advertisement; (*g*) date fixed therein for opening of tenders; (*h*) name and address of

CONTENTS OF VOLUME 18—*Continued.*

successful tenderer; (*i*) amount of bonus paid; (*j*) date when definite selection of blocks was completed and the returns of the survey filed with the Department of the Interior at Ottawa; (*k*) amount of dues collected during the year ending the 30th of April, 1907. in respect of each berth for ground rent, stumpage royalty, and the cost of fire guarding, &c.; also the amount, if any, unpaid and overdue at the termination of said year; (*l*) whether license was issued according to order in council of April 14th, 1903, or of July 23rd, 1906; (*m*) in case of berths upon which during the year 1906-7 no timber was cut, whether notification has been served on license holder to operate a saw-mill, and the date of such notice. Presented 11th March, 1908.—*Mr. McCarthy (Calgary)*
Not printed.

88*j*. Return to an order of the House of Commons, dated 11th December, 1907, bringing the information as contained in Sessional Paper No. 167*b*, brought down April 26th, 1907, up to date. Presented 13th March, 1908.—*Mr. Ames*.. .. ..*Not printed.*

88*k*. Return to an order of the House of Commons, dated 3rd February, 1908, for a copy of all letters, correspondence, applications, advertisements, reports, memoranda, valuations, estimates, tenders, transfers, or other writings or papers in respect of or in connection with timber berths numbers 1413, 1414 and 1415. Presented 16th March, 1908.—*Mr. Lennox*.. .. ..*Not printed.*

88*l*. Return to an order of the House of Commons, dated 26th February, 1908, for a copy of all applications to homestead or purchase, reports, agreements of lease or sale, correspondence exchanged between the Department of the Interior and any person whatsoever, and papers of every description dealing with or treating of the sale or lease of surface, mining, timber, or any other rights in respect of the n.w. ¼ of section 8, township 53, range 4, west of the 5th M. Presented 19th March, 1908.—*Mr. Ames.*
Not printed.

88*m*. Return to an order of the House of Commons, dated 18th December, 1907, showing, in respect of timber berths numbers 1220 to 1226, 1238 and 1272, all bonuses, rentals or dues paid to date by the lessees or other assigns to the Government, together with a copy of all applications, correspondence, reports, advertisements, tenders, leases, transfers or memoranda of any description in connection therewith. Presented 24th March, 1908.—*Mr. Lake*.. .. ..*Not printed.*

88*n*. Return to an order of the House of Commons, dated 9th March, 1908, for a copy of applications, recommendations of applications, and replies thereto, instructions, regarding advertising, and a copy of all tenders and replies thereo, for timber berths numbers 652, 657, 677, 679, 681, 683, 684, 721, 722, 730 and 743. Presented 30th March, 1908.—*Mr. McCraney*.. .. ..*Not printed.*

88*o*. Return to an order of the House of Commons, dated 2nd March, 1908, for the production of all the original applications and tenders filed in the Department of the Interior in respect of timber berths 1046, 1047, 1052, 1058, 1068, 1070, 1093, 1094, 1099, 1191, 1192 and that the same be laid upon the Table of the House, said papers not to be part of the archives of this House, but to be returned by the Clerk to the Department of the Interior after inspection. Presented 13th April, 1908.—*Mr. Ames*.. .. .. ..*Not printed.*

88*p*. Return to an Address of the House of Commons, dated 26th February, 1908, for a copy of all orders in council, letters, telegrams, reports, recommendations, tenders or communications of any kind in relation to the granting of sixteen townships and certain timber limits in the Peace River region, as referred to in a motion of the 15th January, ult., reference 102, not already brought down. Presented 13th April, 1908.—*Mr. Hughes (Victoria and Haliburton)*.. .. ..*Not printed.*

CONTENTS OF VOLUME 18—*Continued.*

88*q*. Return to an order of the House of Commons, dated 26th February, 1908, showing the total sum (money or scrip) that the Government has received on account of the lands, mines, minerals, timber &c., in the various Dominion lands offices in the provinces of Manitoba, Saskatchewan and Alberta, distinguishing between each province, during the following periods: from 1st July, 1896, to 30th June, 1905, and from 1st July, 1905, to 31st December, 1907. Presented 21st April, 1908.—*Mr. Lake*.. .. ..*Not printed.*

88*r*. Return to an order of the House of Commons, dated 19th February, 1908, showing all sales of Dominion lands other than coal lands, of 160 acres and upwards, in the provinces of Manitoba, Saskatchewan and Alberta, which have been made by the Government during the calendar year 1907; the prices obtained; names of purchasers; dates of sales; and in general terms, the grounds upon which sales were authorized. Presented 21st April, 1908.—*Mr. Lake*... .. ..*Not printed.*

88*s*. Return to an order of the House of Commons dated 17th February, 1908, showing: 1. How many applications for timber licenses were received by the Government of Mr. Mackenzie, what area in square miles they covered, how many licenses were issued, what area they covered, and under how many of those licenses operations were actually carired on, and what area these included. 2. How many applications for timber licenses were received by the Government from November 1st, 1878, to July 1st, 1896, and what area in square miles they covered, how many licenses were issued, and what area they covered, under how many of these licenses operations were actually carried on, and what area they covered. 3. How many permits to cut lumber were given to applicants as above in leases where licenses had not issued during each of these periods. Presented 21st April, 1908.—*Mr. Foster*.. .. ..*Not printed*

88*t*. Return to an order of the House of Commons, dated 26th February, 1908, showing a list of timber berths awarded between 1st June, 1904, and 15th July, 1906, with the number of tenders in each case, the amount of each tender, the name of the successful tenderer, the area of each berth, the dates of notice and opening of the tenders in each case. Presented 22nd April, 1908.—*Mr. Crawford*.. .. ..*Not printed.*

88*u*. Return to an order of the House of Commons, dated 6th April, 1908, showing what coal lands were granted to sundry persons through the agency of P. E. Lessard, of Edmonton, together with copies of all letters, papers and documents relating to the application, sale, lease or cancellation of the same. All from the general file for the group of claims, and not the special file for each section. Presented 7th May, 1908.—*Mr. Ames.* *Not printed.*

88*v*. Return to an order of the House of Commons, dated 23rd March, 1908, showing what coal areas are held by F. E. Keniston, of Minneapolis; said return to include a copy of all letters, documents and correspondence relating to the application, sale, lease or cancellation of the same, from the general file for each group of claims, and not the special file of each section. Presented 7th May, 1908.—*Mr. Ames*.. .. .. ..*Not printed.*

88*w*. Return to an order of the House of Commons, dated 6th April, 1908, showing what coal lands are now or have been at any time owned, controlled, leased or operated in townships 53 and 54, range 7, west of the 5th meridian, by the Alberta Development Company (Limited), together with a copy of all applications, correspondence, deeds of sale and other documents in connection therewith. Presented 12th May, 1908.—*Mr. Ames*.. .. ..

CONTENTS OF VOLUME 18—*Continued.*

88*y*. Return to an order of the House of Commons, dated 2nd March, 1908, for the production of all original tenders filed in the Department of the Interior in respect of timber limits numbers 645, 646, 675, 703, 705 and 733 to 737, and that the same be laid upon the table of the House, said papers not to be part of the archives of this House, but to be returned by the clerk to the Department of the Interior after inspection. Presented 20th May, 1908.—*Mr. McCraney*.. .. ..*Not printed.*

88*z*. Return to an order of the House of Commons, dated 23rd March, 1908, showing what coal areas were obtained through the agency of Malcolm McKenzie on behalf of clients; and a copy of all letters, documents and correspondence relating to the application, sale, lease or cancellation of the same; also the same information in regard to J. H. Moss, of Toronto. All from the general file for each group of claims, and not the special file for each section. Presented 27th May, 1908.—*Mr. Ames*.. .. ..*Not printed.*

88*aa*. Return to an order of the House of Commons, dated 26th February, 1908, for a copy of all applications, leases, assignments, correspondence, and papers, of every description in connection with or referring to the granting or sale of the mining rights in sections 17, 20, 21, 28, 29, 32 and 33, of township 8, range 4, west of the 5th meridian. Presented 27th May, 1908.—*Mr. Perley*.. .. ..*Not printed.*

88*bb*. Return to an order of the House of Commons, dated 6th April, 1908, showing what coal lands in townships 41 and 42, ranges 17 and 18, west of the 5th meridian, were granted through the agency of McGiverin & Hayden, Ottawa, together with a copy of all letters, documents and papers relating to the application, sale, lease or cancellation of same. All from the general file for the group of claims, and not the special file for each section. Presented 27th May, 1908.—*Mr. Ames*.. .. ..*Not printed.*

89. Return to an Address of the House of Commons, dated 20th January, 1908, for a copy of all papers and correspondence between the government of Canada and the government of the province of British Columbia, relating to the application of the Grand Trunk Pacific Railway Company to acquire a portion of the Metlakatla Indian Reserve, British Columbia, and to the general question of the claim of said province to the Indian reserves therein, since the date of said application. Presented 30th January, 1908.—*Mr. Ross (Yale-Cariboo)*.. .. ..*Not printed.*

90. Return to an order of the House of Commons, dated 15th January, 1908, for a copy of all correspondence, reports, locations, records of payments made on, payments returned, homestead entries, cancellations thereof; of any order, direction or other authority given to any homesteader or person who had entered for homestead to re-enter after cancellation of entry or default thereunder; any evidence of sale by Peter Luensen to Frederick Heintz, and any correspondence, affidavits, memoranda, or other documents by the department, or any of its officers, with W. L. MacKenzie, Peter Luenson, Frederick Heintz, Alexander K. Thom, Wm. R. Gardner, Thomas J. Oliver, or any other person in regard to the n.e. ¼ sec. 32, township 36, r. 16, west of 2nd m., Saskatchewan. Presented 30th January, 1908.—*Mr. Porter*.. .. ..*Not printed.*

90*a*. Supplementary return to No. 90. Presented 1st April, 1908.. .. ..*Not printed.*

90*b*. Return to order of the House of Commons, dated 6th April, 1908, showing: 1. Any Government lands near New Westminster, British Columbia, sold to one J. W. Patterson, and, if sold, by what department of the Government. 2. Whether they were Indian or military reserve lands, or either of them. 3. The prices Mr. Patterson paid for said lands, if any were sold to him. 4. The date of such sale or sales. Presented 27th April, 1908.—*Mr. Reid (Grenville)*.. .. ..*Not printed.*

90*c*. Return to an order of the House of Commons, dated 16th March, 1908. showing all lands acquired from the Government by the Grand Trunk Pacific Town and Development

CONTENTS OF VOLUME 18—*Continued.*

Company, together with the area, location, purchase price of each tract, and a copy of all correspondence between the Government and the company or any individuals interested therein or connected therewith, as to the general terms and conditions under which the Government land should be granted to the said company. Presented 27th April, 1908.—*Mr. Ames*.. .. ..*Not printed.*

90*d*. Return to an order of the House of Commons, dated 30th March, 1908, showing all the lands granted to the Saskatchewan Valley Land Company under their contract of May, 1902, specifying those which are patented as well as those unpatented, to date. Presented 30th April, 1908.—*Mr. Roche (Marquette)*... .. ..*Not printed.*

90*e*. Return to an order of the House of Commons, dated 26th February, 1908, showing the approximate total area of Dominion lands disposed of by the Government in each of the provinces of Manitoba, Alberta and Saskatchewan, between the 1st July, 1896, and the 30th June, 1905, distinguishing between lands for agricultural purposes, grazing, irrigation, timber and coal; and also from the 1st July, 1905, to the 31st December, 1907. Presented 7th May, 1908.—*Mr. Lake*.. .. ..*Not printed.*

91. Return to an order of the House of Commons, dated 22nd January, 1908, showing the names and number of establishments being operated under the law and regulations of the "Meat and Food Inspection Act"; when they were individually put under the operation of the Act; and the names and number of inspectors for each establishment. presented 30th January, 1908.—*Mr. Hughes (Victoria and Haliburton)*....*Not printed.*

92. Return to an order of the House of Commons, dated 15th January, 1908, for a copy of all papers, correspondence, tenders and contracts, in connection with building piers at Port Maitland, Ontario. Presented 30th January, 1908.—*Mr. Lalor*.. .. ..*Not printed.*

92*a*. Return to an order of the House of Commons, dated 3rd February, 1908, for a copy of all correspondence, contracts, telegrams, reports, plans and specifications, together with all other information not already brought down, in possession of the Government, relating to the construction of piers or docks already constructed or under construction at the following places: Bayfield, Huron county, Ontario; Grand Bend, county of Huron, Ontario; St. Joseph, county of Huron, Ontario; together with a statement of all moneys expended, and to whom paid, and the date of payment, and nature of the work done or material used. Presented 7th May, 1908.—*Mr. Armstrong*....*Not printed.*

92*b*. Supplementary return to No. 92*a*. Presented 11th May, 1908.. .. ..*Not printed.*

93. Return to an order of the House of Commons, dated 13th January, 1908, showing the total amount of bounties paid by the Government since 1896, and the amount for each year on each article. Presented 30th January, 1908.—*Mr. Clements.*

Printed for sessional papers.

94. Return to an address of the Senate, dated 19th February, 1907, for a statement showing the names, christian names, age, and country of origin of all the persons who, coming from the British Isles, from English colonies or from foreign lands, as strangers to Canada, have been placed, whether by order in council, by decision of the Militia Council, or otherwise, in any branch whatsoever of the military service of Canada, in the permanent force or in the volunteer force, together with the date of each of these appointments, the nature of the employment, the rank of the holder (before and after his appointment), and the yearly amount which he receives for his services. Presented 22nd January, 1908.—*Hon. Mr. Landry*.. .. ..*Printed for sessional papers.*

95. Return of reductions and remissions made under Revised Statutes of Canada, chapter 81, section 88, ss. 2. Presented (Senate) 22nd January, 1908, by Hon. Mr. Scott.*Not printed.*

CONTENTS OF VOLUME 18—*Continued.*

96. Return to an address of the House of Commons, dated 17th December, 1906, for a copy of all orders in council, advertisements for tenders, tenders, specifications of every kind, plans, drawings, reports, letters, telegrams, correspondence, contracts, agreements and other documents and papers of every kind, touching or relating to any works at or near St. Andrews Rapids, in the province of Manitoba, and especially such documents as aforesaid in connection with any tender or contract by or on behalf of Charles Whitehead, or Kelly Brothers, or any subsequent tenderers or contractors. Presented 29th January, 1908.—*Mr. Borden (Carleton)*.. .. ..*Not printed.*

97. Return to an order of the House of Commons, dated 13th January, 1908, for a copy of all papers, correspondence, and evidence, in respect of the trial for criminal conspiracy against certain persons in the Yukon in connection with the Dominion elections of 1904. Presented 3rd February, 1908.—*Mr. Foster* . .. .*Not printed.*

98. Return to an order of the House of Commons, dated 13th January, 1908, for a copy of all correspondence between Major E. S. Wigle, of Windsor, Honourable R. F. Sutherland, A. H. Clarke, and the Minister of Inland Revenue, respecting the extension of the franchise of the Windsor, Detroit and Belle Isle Ferry Company. Presented 3rd February, 1908.—*Mr. Clements*.. .. ..*Not printed.*

99. Return to an order of the House of Commons, dated 29th January, 1908, for a copy of all correspondence, telegrams, or reports, respecting the refusal of the lieutenant governor of British Columbia to give his assent to a bill passed by the legislature of that province in 1907, respecting immigration and commonly referred to as the Natal Act. Presented 3rd February, 1908.—*Mr. Smith (Nanaimo)*.. .. ..*Printed for sessional papers.*

100. Return to an address of the House of Commons, dated 11th December, 1907, for a copy of all papers and correspondence between the government of Canada and any of its ministers with reference to the establishment of a fast line of steamship communication between Great Britain, Australia, New Zealand and Canadian ports. Presented 3rd February, 1908.—*Mr. Foster*.. .. ..*Not printed.*

101. Return to an order of the House of Commons, dated 11th December, 1907, for a copy of all correspondence, enclosed clippings, agreements, statements, &c., between the government or any member thereof, and especially the Minister of Marine and Fisheries, the Minister of Railways, the Minister of Agriculture, the Minister of Militia, and Sir Wilfrid Laurier, and one F. E. Williams, of St. John, New Brunswick; one W. H. Trueman, of St. John, and any other person or persons whatsoever in relation to the establishment of a bait freezer and cold storage established in St. John, New Brunswick. Presented 5th February, 1908.—*Mr. Foster*.. .. ..*Not printed.*

102. Return to an order of the House of Commons, dated 11th December, 1907, showing the expenditure by the Dominion Government on (*a*)wharfs; (*b*) harbours and river improvements; (*c*) dredging; (*d*) public buildings; for each year since 1896, in the counties of Digby, Yarmouth, Shelburne, Queen's, Lunenburg and Pictou, Nova Scotia, specifying the works by name, with amounts expended thereon. Presented 6th February, 1908.—*Mr. Foster*.. .. ..*Not printed.*

103. Return to an order of the House of Commons, dated 20th January, 1908, for a copy of letters, telegrams, and reports, regarding complaints made by John Franklin and Stapleton Brothers, with respect to Indian Agent Yeomans. Presented 6th February, 1908.—*Mr. Foster*.. .. ..*Not printed.*

104. Return to an order of the House of Commons, dated 20th January, 1908, showing the amount paid each year for provisions for the Royal Military College, for the Halifax Garrison, and the Permanent Military School in Quebec, the average number of men provisioned each year of the above institutions, and cost per man per day. Presented 10th February, 1908.—*Mr. Foster*.. .. ..*Not printed.*

CONTENTS OF VOLUME 18—*Continued.*

105. Return to an order of the House of Commons, dated 11th December, 1907, showing the number of fishing licenses issued by the Government for any of the lakes in the province of Saskatchewan, to whom issued, and on what lakes. Presented 10th February, 1908.—*Mr. Chisholm (East Huron)*.. .. ..*Not printed.*

106. Return to an order of the House of Commons, dated 15th January, 1908, showing what lands have been sold, leased, given as homesteads, transferred or set apart in any way by the Government to each: individuals, companies, syndicates, or other organizations in the Peace River Valley, or along or near tributaries thereof, in the Northwest of Canada; when each area was allotted; the terms between the Government and the various parties or organizations concerned; what prices per acre were realized from these transactions; with whom the Government conducted negotiations in each case; the regulations governing the securing of land in the Peace River Valley; and how far it is from Edmonton to Dunvegan. Presented 11th February, 1908.—*Mr. Hughes (Victoria and Haliburton)*.. .. ..*Not printed.*

107. Return to an address of the House of Commons, dated 22nd January, 1908, for a copy of all orders in council, reports, memoranda, correspondence, documents, plans, tenders and advertisements of every kind, nature and description, relating to the proposed acquisition under lease of certain car work shops with railway sidings at Moncton, New Brunswick. Presented 12th February, 1908.—*Mr. Barker*.. .. ..*Not printed.*

108. Return to an order of the House of Commons, dated 16th December, 1907, showing all coal lands leased, sold or otherwise disposed of from the 1st of March, 1907, to date, giving the area disposed of, the party to whom, the consideration therefor, the assignments made, if any, the date thereof, and the name of the assignee in each case. Presented 13th February, 1908.—*Mr. Ames*.. .. ..*Not printed.*

108*a*. Return to an order of the House of Commons, dated 26th February, 1908, showing. in respect of each of the undermentioned blocks disposed of as coal lands by the Government, viz.: Section 13, of township 9, range 4, west of the 5th m.; section 16, township 10, range 3, west of the 5th m., section 15, township 11, range 4, west of the 5th m.; section 20, township 12, range 4, west of the 5th m.; section 5, township 13, range 4, west of the 5th m., section 21, township 19, range 7, west of the 5th m.; when and by whom the first application was made for right to acquire; when and to whom the original grant of mining rights was made; what transfers of rights have been recorded, the date of transfer, and date of registration of same; who the present owner or occupant is, as known to the department; and the name and address of each company or person above referred to. Presented 16th March, 1908.—*Mr. Ames*.. .. ..*Not printed.*

108*b*. Return to an address of the House of Commons, dated 2nd March, 1908, for a copy of (a) an order in council of the 19th May, 1902, and the regulations therein referred to and approved for the disposal of coal lands, the property of the Dominion Government, in Manitoba, the Northwest Territories and British Columbia. (*b*)A copy of all orders in council altering, amending or cancelling any such regulations for the aforesaid purposes, and the said amended or other regulations. (*c*)A copy of all orders in council approving, amending or cancelling regulations as regards the Yukon for the purposes aforesaid, and the said regulations and amended regulations. Presented 24th March, 1908.—*Mr. Barker*.. .. ..

CONTENTS OF VOLUME 18—*Continued.*

108*d*. Return to an order of the House of Commons, dated 26th February, 1908, for a copy of all inquiries, applications, leases, contracts, agreements, assignments, correspondence and papers of every description, in connection with or referring to the granting of coal mining privileges in section 11, township 8, range 4, west of the 5th meridian. Presented 27th March, 1908.—*Mr. Ames*.. .. ..*Not printed.*

108*e*. Return to an order of the House of Commons, dated 16th March, 1908, showing: 1. What leases for coal lands in the Northwest Territories were granted by the Government in the years 1903 and 1904. 2. To whom, and on what dates the same were granted, and the amounts paid therefor. 3. Whether the person to whom the lease was granted was the original applicant. 4. Whether any assignment of such leases has been made, when, and to whom. 5. Who the present holders are of said leases. Presented 1st April, 1908.—*Mr. Boyce*.. .. ..*Not printed.*

108*f*. Supplementary return to 108*e*. Presented 6th April, 1908.. .. ..*Not printed.*

108*g*. Return to an order of the House of Commons, dated 16th December, 1907, for a copy of all applications, reports, correspondence, leases, contracts, deeds, sale and documents of every description in connection with the purchase of coal mining lands either on their own behalf or on behalf of clients, by the firm of Hough, Campbell & Ferguson, or by any individual member of said firm, together with a copy of the regulations governing the sale of such rights at the time of purchose. Presented 30th April, 1908.—*Mr. Herron*.. .. ..*Not printed.*

108*h* Return to an order of the House of Commons, dated 19th February, 1908, setting forth in respect of the following coal lands: 1. The name and address of the first applicant and the date thereof. 2. The names and addresses of all subsequent applications, with date thereof, in the order of application. 3. The name and address of the party to whom the mining rights were granted, with date of sale or lease by the Government. 4. Price paid per acre, sale or lease. 5. Date and amount of first payment on account of purchase price. 6. Dates and amounts of each subsequent payment on account of purchase price. 7. Total amount paid as purchase price and balance, if any, still unpaid. 8. How long reservation was made by the department in favour of the grantee or his assigns. 9. The name and address of all parties to whom assignments were made, with date of each assignment, and date of its registration with the department. 10. The name and address of present owner of said mining rights. 11. A copy of all correspondence in reference to the same: Township 7, range 3, west of 5th m.; sections 1, 2, 3, 4, 5, 6, less the s.e. ¼; section 7, less e. ½; section 8; section 9; section 10, less s.w. ¼; section 11, less s.e. ¼; section 14, less e. ½; section 15; section 16, less n.e. ¼; section 17; section 20, less e. ½ of n.e. ¼; section 21, less s. ½ and n.w. ¼; section 22; section 28; section 27, less e. ½; section 32, less e. ½; section 33; section 34, less e. ½. Township 7, range 2, west of 5th m.; section 18, 20 and 21 Township 6, range 3, west of 5th m.; sections 27 and 28; section 32, less w. ½; sections 33 and 34. Presented 22nd April, 1908.—*Mr. Ames*.. .. ..*Not printed.*

109. Return to an order of the House of Commons, dated 22nd January, 1908, showing on what dates since June 30th, 1906, advances were made on account of travelling expenses to Honourable L. P. Brodeur, to Mr. Wiallard, his private secretary, and to Napoléon Potvin, his messenger, respectively, for what amounts, and to what accounts they were severally charged; also what refunds, if any, have been made on any of these several advances, and on what dates. Presented 14th February, 1908.—*Mr. Foster*..*Not printed.*

109*a*. Return showing all advances to Ministers of the Crown and their private secretaries, on account of travelling or other expenses in connection with the Imperial Conference of 1907, the date of such advances, and the appropriation against which it was charged. Presented 2nd March, 1908.—*Mr. Foster*.. .. ..*Not printed.*

CONTENTS OF VOLUME 18—*Continued.*

109*b*. Return (as far as the Department of Inland Revenue is concerned), to an order of the House of Commons, dated 22nd January, 1908, showing the advances made each year since July 1, 1904, to December 31, 1907, on account of travelling expenses to Honourable L. P. Brodeur and his private secretary and messengers, the date and amount of each advance, and the appropriation to which it was charged, the dates at which each advance was finally accounted for, and the dates on which any repayments were made to the treasury, and the amount of such repayments, and all correspondence with the Auditor General's Department in connection therewith. Presented 2nd March, 1908.—*Mr. Foster*.. .. ..*Not printed.*

110. Return to an order of the House of Commons, dated 8th January, 1908, showing the total quantity of freight carried on the winter steamers between Prince Edward Island and the mainland during the past two seasons, 1905-6 and 1906-7; the amount of freight that was delayed in transit for those two seasons; the freight rate on the different classes of goods carried; the amount received for freight during those two seasons; the amount received for passengers and the number carried; the number of days the steamers failed to cross in each of those years; and the amount of damages paid to shippers for delay of goods in transit. Presented 14th February, 1908.—*Mr. Martin (Queen's)*.. .. ..*Not printed.*

110*a*. Return to an order of the House of Commons, dated 20th January, 1908, for a copy of all correspondence, telegrams, &c., in the possession of the Government or any member or official thereof, respecting the withdrawal of the winter steamers from Charlottetown on or about the 8th January, instant, and their replacement some days later. Presented 14th February, 1908.—*Mr. Martin (Queen's)*.. .. ..*Not printed.*

111. Return to an order of the House of Commons, dated 3rd February, 1908, for a copy of all correspondence, reports and papers, respecting the salary, expenses, duties and annual period of employment of W. Maxwell Smith, Dominion fruit inspector in British Columbia; also full details of his expenses during the years 1906 and 1907, respectively. 1908.—*Mr. Jackson (Elgin)*.. .. ..*Printed for sessional papers.*

112. Return to an order of the House of Commons, dated 13th January, 1908, for a copy of pedigreed cattle, if any, did the Central Experimental Farm, Ottawa, sell during the years 1906 and 1907; and how many in each year, giving the different breeds, the name of purchaser, his place of residence, price paid, and breed. Presented 14th February, 1908.—*Mr. Jackson (Elgin)*.. .. ..*Printed for sessional papers.*

113. Return to an order of the House of Commons, dated 13th January, 1908, for a copy of all papers, accounts and correspondence, in connection with the seizure of the M. J. Wilson Cordage Company, of the city of Chatham, Ontario, by the Dominion Government, in the year 1904. Presented 17th February, 1908.—*Mr. Clements*.. ..*Not printed.*

114. Return to an order of the Senate, dated 31st January, 1908, showing the appointments made to the Senate from confederation, with date of appointment and date when the appointees ceased to be senators. Presented 11th February, 1908.—*Hon. Mr. Wilson.*
Printed for distribution.

115. Return to an address of the Senate, dated 29th January, 1908, showing the number of persons killed and of those otherwise injured, separately, at railway crossings during the last three years, giving the number in each year separately; giving also for each year the number of persons thus killed or otherwise injured in thickly populated places separately from those killed or otherwise injured in the rural districts, showing also the number of such accidents at protected crossings separately from unprotected crossings. Presented 11th February, 1908.—*Hon. Mr. Béique*.. .. ..*Not printed.*

116. Return to an order of the House of Commons, dated 11th December, 1907, for a copy of all communications, reports, correspondence, or other papers, between the Depart-

CONTENTS OF VOLUME 18—*Continued.*

ment of the Interior and any of its officials, and A. Samovici, H. Bolocan, and any other person or persons in regard to the n.w. ¼ section 20, township 22, range 13, west 2nd m., including applications for cancellation, protections, homesteads, inspectors' reports, &c. Presented 18th February, 1908.—*Mr. Lake*.. .. ..*Not printed.*

117. Return to an order of the House of Commons, dated 11th December, 1907, for a copy of all correspondence between the Departments of the Marine and Fisheries and Justice of Canada and the Attorney General of Nova Scotia, or any official acting under his authority, in connection with the suit in the Supreme Court of Nova Scotia of the King by Dr. Tait, of Cheticamp, in the county of Inverness, Nova Scotia, versus William Ancoin. Presented 18th February, 1908.—*Mr. McLennan*.. .. ..*Not printed.*

118. Return to an order of the House of Commons, dated 18th December, 1907, for a copy of all contracts for food for men at the volunteer camps throughout Canada for the season of 1907; also for the regular troops at Halifax, Quebec and other places. Presented 18th February, 1908.—*Mr. Smith (Wentworth)*.. .. ..*Not printed.*

119. Return to an order of the House of Commons, dated 3rd February, 1908, for a copy of all correspondence between the Railway Commission and the Department of Railways and Canals, or the Intercolonial Railway, and between the Railway Commission and the Canadian Pacific Railway, and the Grand Trunk Railway, and between the Railway Commission and the Fredericton Board of Trade, in reference to the alleged discrimination against the city of Fredericton in the matter of freight rates; and also for a copy of all other papers and documents on file with the Railway Commission in relation thereto. Presented 19th February, 1908.—*Mr. Crocket*.. .. ..*Not printed.*

120. Return to an order of the House of Commons, dated 16th December, 1907, for a copy of all offers, reports, valuations, plans, deeds of purchase, correspondence and other papers of every description in connection with the purchase of site for the new Montreal examining warehouse, together with a statement of all expenditure and all indebtedness incurred to date in this connection. Presented 19th February, 1908.—*Mr. Ames.*

Not printed.

121. Return to an order of the Senate, dated the 30th January, 1908, showing: 1. Title of each Bill by years sent by the Senate to the House of Commons, from 1867 to 1907, inclusive, that was (*a*) amended by the Hous of Commons, or (*b*) rejected. 2. Title of each Bill by years sent up by the House of Commons to the Senate, from 1867 to 1907, inclusive, that was (*a*) amended by the Senate, or (*b*) rejected. 3. The total number of Bills for each year as above to be tabulated in four periods, (*a*) 1867 to 1873, inclusive; (*b*) 1874 to 1878, inclusive; (*c*) 1879 to 1896, first session, inclusive; (*d*) 1896 to 1907, inclusive. Presented 19th February, 1908.—*Hon. Mr. Ross (Middlesex)*.. .. .. ..*Not printed.*

122. Report of the commissioners appointed to inquire into a dispute between the Bell Telephone Company of Canada (Limited) and the operators of the said company at Toronto, with respect to wages and hours of employment, etc. Also copy of evidence taken under Royal Commission in the dispute between the Bell Telephone Company of Canada and its operators, in February, 1907. Presented 24th February, and 11th March, 1908, by Hon. R. Lemieux.. .. ..*Not printed.*

123. Return to an order of the House of Commons, dated 17th February, 1908, for a copy of the contract and all correspondence relating to a payment of $3,900 to the Midland Towing and Wrecking Company, as set out at page P—32 of the Auditor General's Report for 1906-7, and of the advertisement calling for tenders. Presented 10th March, 1908.—*Mr. Bennett*.. .. ..*Not printed.*

124. Return to an order of the House of Commons, dated 18th December, 1907, showing what sums have been expended or voted for the dredging of the Rivière à la Graisse, at Rigaud; to whom the contracts were given; and what sums have been voted or paid out for dredging Dorion Bay, Vaudreuil station. Presented 24th February, 1908.—*Mr. Bergeron*.. .. ..*Not printed.*

CONTENTS OF VOLUME 18—*Continued.*

124*a*. Return to an order of the House of Commons, dated 18th December, 1907, showing what sums have been voted or expended for the dredging of the river bottom between Charlemagne and Terrebonne; since when the dredging has been going on there; what sums have been voted or expended for wharfs at Terrebonne and at St. François de Sales; and who obtained the contracts. Presented 24th February, 1908.—*Mr. Bergeron.* *Not printed.*

124*b*. Return to an order of the House of Commons, dated 11th December, 1907, showing: 1. What harbours or rivers in the province of Ontario were tenders invited for dredging work by the Department of Public Works during the present year. 2. The names of the successful tenderers at each of the said places for which dredging tenders were invited in Ontario in 1907, and the prices asked by each party respectively. 3. Amounts of the tenders respectively of the different persons tendering at each of the foregoing points. 4. Also at what points new tenders were invited, and when the first tenders were accepted. Presented 9th June, 1908.—*Mr. Bennett*.. .. ..*Not printed.*

124*c*. Return to an order of the House of Commons, dated 6th of April, 1908, for a copy of all the correspondence exchanged between the Government and Messrs. T. B. Mongenais, Hugh McMillan and others, relating to dredging work done in the River Rigaud, formerly the River Graisse, up to the year 1890. A copy of the reports and correspondence relating to the construction or purchase of the Graham wharf. A copy of the report and correspondence relating to the dredging done at Como up to 1900. A copy of the reports and correspondence relating to the dredging done at Vaudreuil Village, and also those relating to the construction and repair of the wharf situated in that village since 1867. And also a copy of the report and correspondence relating to the deepening of the River St. Louis at Beauharnois. Presented 30th June, 1908.—*Mr. Boyer*.. .. ..*Not printed.*

125. Return to an order of the House of Commons, dated 3rd February, 1908, for a copy of all correspondence, telegrams, engineer's reports, &c., in the hands of the Government or any member or official thereof, respecting proposed repairs to the wharf at Little Sands, in Prince Edward Island. Presented 25th February, 1908.—*Mr. Martin (Queen's).* *Not printed.*

126. Return to an order of the House of Commons, dated 12th February, 1908, for a copy of the report made by John Fraser, of the Auditor General's Department, on the 7th January, 1898, of a special examination held by him of the financial affairs of the Montreal Turnpike Trust. Presented 10th March, 1908.—*Mr. Monk*.. .. ..*Not printed.*

126*a*. Return to an order of the House of Commons, dated 22nd January, 1908, showing: 1. The present indebtedness to the Dominion Government of the Montreal Turnpike Trust (*a*) on capital account, (*b*) for arrears of interest. 2. The amounts collected at each toll gate belonging to the said Turnpike Trust during the three years ending 31st December, 1905, 1906, 1907, respectively. 3. The names of all parties who have commuted their tolls during each of the above-mentioned years, 1905, 1906, 1907, and the amount of the commutation money paid to the Trust in each case. 4. The amounts expended on each section or road division, under the control of the said Trust, during each of the said years, ending 31st December, 1905, 1906, and 1907, respectively, and the contracts given out during each of the said years, with the name of the contractor and the date and amount involved in each case; and a statement in each case also as to whether the contract was awarded after tender called through the newspapers. 5. The amount paid out during each of the said three years, 1905, 1906, 1907, at each toll gate for salaries of day and night guardians, and any other expenditure at each of the toll gates maintained. 6. The names of all parties holding passes for free use of the roads under control of said Trust, during each of the said three years above referred to, 1905, 1906, 1907, with a statement in each case of the reason why the pass was so granted. 7. The expense of the said Trust during each of the said years, for rent, salaries of the

CONTENTS OF VOLUME 18—*Continued.*

office, inside or outside service, giving name and remuneration of each official. 8. The actual present indebtedness in detail of the said Trust outside of its bonds due to the Government of Canada. 9. The amounts collected, by said Trust, year by year, since the 1st February, 1905, from municipalities under special agreements made as to their share pro rata of the bonded indebtedness of the Turnpike Trust. 10. The names of all those members of the Trust appointed or elected to represent the bondholders since the 1st July, 1896, with the date of the election in each case. 11. The amounts paid by the Trust to any of its members or officials during each of the said three years, 1905, 1906, 1907, whether as travelling or personal expenses, or indemnity for attendance or for any other reason whatever. 12. The name of the auditor of the Trust, and the date of the audit made of the company's affairs, in each of the said three years, 1905, 1906, 1907, respectively. 13. A copy of the agreements between the Trust and any municipalities on the Island of Montreal, by which the Trust ceded to said municipalities any portion of its roads, said copy to be certified by the president and secretary of said Trust. Presented 20th March, 1908.—*Mr. Monk*.. .. ..*Not printed.*

127. Return to an address of the Senate, dated 24th January, 1908, for a copy of the different tariffs in force upon the Intercolonial Railway, in 1896-7 and 1906-7, between Quebec and St. Flavie, and all intermediate stations between those two points, for the carriage of passengers or of goods, under the operation of the winter-tariff and under that of the summer-tariff. Presented 24th February, 1908.—*Hon. Mr. Landry*.. ..*Not printed.*

128. Statement of the affairs of the British Canadian Loan and Investment Company, Limited, for the year ended the 31st of December, 1907. Presented 25th February, 1908, by the Hon. The Speaker.. .. ..*Not printed.*

129. Return to an order of the House of Commons, dated 19th February, 1908, showing how much money has been paid since 1896 to the Eclipse Manufacturing Company of Ottawa; how much each year; and the general character of the supplies furnished. Presented 27th February, 1908.—*Mr. Blain*.. .. ..*Not printed.*

130. Return to an order of the House of Commons, dated 10th February, 1908, for a copy of all correspondence between Mr. A. E. Dyment, M.P., and the Department of Marine and Fisheries as to granting of pound net licenses in 1905 to Messrs. Low & Roque, of Killarney, as also to any other persons; also a list of persons to whom pound net licenses were granted in that year. Presented 27th February, 1908.—*Mr. Bennett.*
Not printed.

131. Return to an order of the House of Commons, dated 12th December, 1907, showing: 1. The number of disputes dealt with under the Industrial Disputes Investigation Act, 1907, to the 1st of December, 1907. 2. The dates at which the several applications for the operation of the Act have been received. 3. Names of the parties concerned in the several disputes. 4. Name of the party making application. 5. Locality of dispute. 6. Number of persons affected. 7. Nature of dispute. 8. Names of members of board of conciliation and investigation where same has been established. 9. Date on which board was established. 10. Date of sittings of board. 11. Result of the reference of the dispute under Act. Presented 27th February, 1908.—*Mr. Smith (Nanaimo).*
Not printed.

132. Return to an order of the House of Commons, dated 12th February, 1908, for a copy of correspondence, plans, and other data in connection with the flooding of roads above the dam at Wilberforce, in Haliburton County, and the proposals, if any, for improving said roads and the bridge so as to prevent obstruction of traffic. Presented 27th February, 1908.—*Mr. Hughes (Victoria and Haliburton)*..... .. ..*Not printed.*

133. Return to an order of the House of Commons, dated 17th February, 1908, for a copy of reports, plans, surveys, and other data, in connection with the proposal to construct a branch canal from Balsam Lake, on the Trent Canal, to the head of Gull River waters, in Haliburton County. Presented 27th February, 1908.—*Mr. Hughes (Victoria and Haliburton)*... .. ..*Not printed.*

CONTENTS OF VOLUME 18—*Continued.*

134. Return to an order of the House of Commons, dated 11th December, 1907, for a copy of all correspondence received by the Department of Agriculture in connection with the inspection of meats and the regulations in connection with the Inspection of Meats and Canned Foods Bill. Presented 27th February, 1908.—*Mr. Clements*.. .. ..*Not printed.*

134*a*. Return to an order of the House of Commons, dated 9th March, 1908, for a copy of all correspondence, telegrams, reports and recommendations in possession of the Government, with respect to the inspection of packing houses, or the Meat Inspection Act, including the appointment of inspectors. Presented 25th March, 1908.—*Mr. Armstrong. Not printed.*

135. Return to an order of the Senate, dated 26th February, 1908, for a detailed statement of the expenses incurred during the past three years, in connection with the synoptical reports of the debates of the Senate, furnished by the special reporter of that House, as well as a statement of the nature and particulars of the agreement with the present reporter. Presented 27th February, 1908.—*Hon. Mr. Wilson*.. .. ..*Not printed.*

136. Return to an address of the Senate dated 11th February, 1908, showing the amount of imports of oxide of aluminum during the years 1903, 1904, 1905, 1906 and 1907, with the values of such imports for each one of said years separately. Presented 28th February, 1908.—*Hon. Mr. Ellis*.. .. ..*Not printed.*

136*a*. Return to an address of the Senate, dated the 11th February, 1908, showing the amount of aluminum exported during the years 1903, 1904, 1905, 1906 and 1907, with the values of such exports for each one of the said years separately. Presented 28th February, 1908.—*Hon. Mr. Ellis*.. .. ..*Not printed.*

137. Regulations in virtue of the provisions of the Act 6-7 Edward VII., chapter 16, "The Electricity and Fluid Exportation Act." Presented 17th March, 1908, by Hon. W. Templeman.. .. ..*Not printed.*

138. Return to an order of the House of Commons, dated 22nd January, 1908, for a copy of all correspondence, documents, resolutions and other papers, which have passed between the Government of Canada, or any member of the Government, and any railway company or any individual relating to the building of a railroad from any point in Manitoba, Saskatchewan, Alberta, or British Columbia, to Fort Churchill or any point on Hudson Bay. Presented 2nd March, 1908.—*Mr. Schaffner*.. .. ..*Not printed.*

139. Copy of an order in council appointing Mr. Samuel Tovel Bastedo, agent on behalf of the Dominion Government, to confer with the provincial governments with a view to settlement of the Fisheries question. Presented 11th March, 1908.—*Hon. L. P. Brodeur. Not printed.*

140. Return to an order of the House of Commons, dated 12th February, 1908, for a copy of all correspondence, papers, writings, plans and letters between the Government and the International Waterways Commission, on one part, and the St. Lawrence Power Company and the Long Sault Development Company, of the other part, with regard to the entire damming of the St. Lawrence river, in the vicinity of Cornwall; together with a copy of all memorials, letters and resolutions of protest sent to the Government by the Board of Trade of Montreal, the Chambre de Commerce, District de Montreal, the Shipping Federation of Montreal, the Dominion Marine Association, and others. Presented 2nd March, 1908.—*Mr. Gervais*.. .. ..*Not printed.*

140*a*. Supplementary return to No. 140. Presented 13th July, 1908.. .. ..*Not printed.*

141. Return to an order of the House of Commons, dated 17th February, 1908, for a copy of advertisement calling for tenders for dredging work on Holland river, Trent Valley canal system, tenders received, schedules showing prics paid, recommendation of person for inspector, date of payments made to the contractors, and the contract with contractor. Presented 2nd March, 1908.—*Mr. Bennett*.. .. ..*Not printed.*

CONTENTS OF VOLUME 18—*Continued.*

141*a*. Return to an order of the House of Commons, dated 13th January, 1908, showing what contracts for dredging in the St. Mary's river, Kaministiquia river, Mission river, Port Arthur harbour, Fort William harbour, and in Thunder Bay, or of any of the inlets or rivers thereof, have been let during the years 1904, 1905, 1906 and 1907, showing also: (*a*) the names, addresses and calling of all the tenderers in each case; (*b*) the amount of each tender; (*c*) the nature and extent of the work to be let in each case; (*d*) the names, addresses and calling of the successful tenderer in each case; (*e*) the prices at which each contract was let, (*f*) the nature or form of security for the due performance of the work in each case, and (*g*) the disposition of or change in the form of any such security after it was originally given or deposited; also, for a copy of all tenders, contracts, bonds or other securities, and of all correspondence relating or incident to all or any such tenders or contracts, including all correspondence relating to such contracts, or incident thereto, before and during the performance of the work and on file up to the date of the order for such return. Presented 17th July, 1908.—*Mr. Boyce.*
Not printed.

142. Return to an address of the House of Commons, dated 18th December, 1907, for a copy of all orders in council, correspondence, contracts, papers and reports in connection with the employment of certain experts to prepare a system of accounting and book-keeping in the Department of Marine and Fisheries. Presented 2nd March, 1908.—*Mr. Foster.*
Not printed.

143. Return to an order of the House of Commons, dated, 11th December 1907, for a copy of all correspondence in connection with the application, granting, operation or renewal of license and lease conveying the privileges of fishing in Cedar, Moose, Cormorant and Clearwater Lakes; also a copy of said license and lease. Presented 3rd March, 1908.—*Mr. Ames*.. .. .. .

CONTENTS OF VOLUME 18—*Continued.*

148. Return to an order of the House of Commons, dated 17th February, 1908, showing the individual name and place of residence of the captain and crew of each of the Government steamers *Lansdowne, Aberdeen, Druid, Brant, Lady Laurier, Minto* and *Stanley.* Presented 5th March, 1908.—*Mr. Stanfield*.. .. ..*Not printed.*

148*a*. Return to an order of the Senate, dated the 5th of February, 1908, for a statement showing, in so many columns: 1. The names of the officers actually employed on board of Government vessels or of vessels hired by the Government for the season of navigation in the River St. Lawrence. 2. The amount of wages or salaries paid monthly to each of them for the period of their annual engagement. 3. The amount of wages or salaries paid monthly to those who are only employed for a part of the year. 4. The amount of wages or salaries paid monthly to those who, over and above their real service, are paid a part of their wages or salaries during the months in which the vessels are laid up for the winter. Presented 20th February, 1908.—*Hon. Mr. Landry.*
Not printed.

149. Return showing what changes have occurred in the House of Commons branches of the Clerk of the House and the Sergeant-at-arms' service since 1st July, 1907. Presented 5th March, 1908.—*Mr. Owen*.... .. ..*Not printed.*

150. Return to an order of the House of Commons, dated 10th February, 1908, showing: 1. How many Returns or Sessional Papers have been presented to Parliament in answer to motions for the same, since the 1st of January, 1906. 2. How many of these Returns were taken out of the Office of Routine and Records, and the Journal Office, by members of this House, since the above date, giving also the name of the member to whom delivered. 3. For what length of time such Returns were retained by the members who obtained them. 4. How many of these Returns had not been returned to the proper officer of the House of Commons on the 1st of January, 1908. 5. In the case of those returned, how long they were out with the members. 6. How many of these Returns are still in the possession of the members, and how long they have had them. 7. The means usually adopted by the Clerk of Routine and Records and the Clerk of Current Sessional Papers to have outstanding returns retransferred to their possession. 8. The average cost to the country of preparing these Returns by the various departments interested, during the above period. Presented 6th March, 1908.—*Mr. Johnston.*
Not printed.

151. Return to an order of the House of Commons, dated 16th December, 1907, showing: 1. The number of fishing licenses, the names of the parties to whom issued, and also the amounts of the revenues received from each license, on any or all of the lakes in the province of Saskatchewan. 2. For a copy of all correspondence in connection with each license so issued and in force, or about to be issued. 3. Also for a copy of the different forms used for fishing licenses in the province of Saskatchewan. Presented 9th March, 1908.—*Mr. Chisholm (East Huron)*.. .. ..*Not printed.*

152. Return to an order of the House of Commons, dated 20th January, 1908, for a copy of all correspondence, documents and papers, in the investigation into the case of Mr. O. S. Finnie, chief clerk in the gold commissioner's office, Dawson, Y.T. Presented 6th March, 1908.—*Mr. Thompson*.. .. ..*Not printed.*

153. Return to an order of the House of Commons, dated 19th February, 1908, for a copy of all correspondence between Lieut.-Colonel Mallette, of the 64th Battalion, and the Department of Militia and Defence, concerning Major Sabourin, of St. John, Quebec. Presented 6th March, 1908.—*Mr. Bergeron*.. .. ..*Not printed.*

153*a*. Return to an order of the House of Commons, dated 19th February, 1908, for a copy of all correspondence between Lieut.-Colonel Mallette, of the 64th Battalion, and the Department of Militia and Defence, for the organization of a regiment in Valleyfield, Quebec. Presented 6th March, 1908.—*Mr. Bergeron*.. .. ..*Not printed.*

CONTENTS OF VOLUME 18—*Concluded.*

154. Report of the Royal Commission on the Quebec Bridge inquiry; also the Report on the Design of the Quebec Bridge by C. C. Schneider; with Appendices. Presented 9th March, 1908, by Hon. G. P. Graham.

Printed for both distribution and sessional papers

CONTENTS OF VOLUME 19.

154. (Vol. 2.) Royal Commission Quebec Bridge inquiry. Minutes of proceedings. Evidence and exhibits.. .. .. *Printed for both distribution and sessional papers.*

154*a*. Return to an address of the House of Commons, dated 12th December, 1907, for a copy of all orders in council, correspondence, reports, memoranda, papers and documents, since the 1st day of January, 1900, relating to the Quebec Bridge, including all reports and orders in council, relating to the plans and specifications for the works of the undertaking, or to any approval thereof by the Governor in Council, or by the Department of Railways and Canals. Presented 26th May, 1908.—*Mr. Borden (Carleton).*

See No. 154.

154*b*. Return to an address of the Senate, dated 29th Januray, 1908, for a statement showing: 1. If the Quebec Bridge and Railway Company has fulfilled the obligation which was imposed upon it by clause 4 of the agreement made, between it and the Government, on the 19th day of October, 1908, which clause reads as follows: "4. The company will procure subscriptions for additional stock to the amount of $200,000, such new stock to be issued at a price not below par and to be immediately paid up in full, the proceeds to be applied in the first place to the payment of the discount at which the bonds of the company were issued as aforesaid, to wit the sum of $188,721." (Being exactly the difference between the sum of $472,000, the amount of bonds issued, and the sum of $283,279, for which these same bonds were accepted.) 2. When did the company so furnish subscriptions for additional work to the amount of $200,000. 3. Who are the persons or the companies who divided among them this additional stock to the round sum of $200,000. 4. On what date and for what amount did each of these persons or each of these companies become owner of the aforesaid stock. 5. On what date did each of the aforesaid persons or companies pay into the hands of the company the price (in part or in whole) of the stock so subscribed. 6. And if this amount of $200,000 was paid in full and in what manner, distinguishing the amount paid in cash from the amount paid in promissory notes or in any other ways. Presented 2nd June, 1908.—*Hon. Mr. Landry*.. .. ..

CONTENTS OF VOLUME 19—*Continued.*

poses, since 1896; the location and amount in each case, specifying townships, sections, half or quarter-section; to whom it has been sold, or alienated, and on what terms of settlement; the price per acre, on terms of payment, and the nationality of the settlers in each colony; when the land was sold, alienated, reserved, or set apart, for such purpose, in each case; and how many of these companies have complied with their contracts, and to what extent. Presented 9th March, 1908.—*Mr. Sproule*... ..*Not printed*

155*a*. Return to an order of the House of Commons, dated 26th February, 1908, showing what lands, if any, have been reserved for grazing purposes or for acquisition by means of irrigation within the tract described as follows: Townships 12 to 19, inclusive, in ranges 15 to 21, west of the 4th meridian; and when such lands were so reserved, and for how long it is the purpose of the Government to continue such reservation. Presented 16th March, 1908.—*Mr. Lennox*.. .. .. .

CONTENTS OF VOLUME 19—*Continued.*

157. Return to an order of the House of Commons, dated 8th January, 1908, for copies of all documents, petitions, memoranda and correspondence received by the Government since 1904, to this day, regarding the amendments to be made to the Inland Revenue Act for the purpose of encouraging and protecting still more the Canadian tobacco industry. Presented 9th March, 1908.—*Mr. Dubeau*.. .. ..*Not printed*

157*a*. Return to an order of the House of Commons, dated 12th February, 1908, for a copy of all correspondence between the collector of customs at Charlottetown, Prince Edward Island, and the Minister of Customs, or the Commissioner of Customs, including declarations or statements in writing made by Messrs. Donald Nicholson and Evelyn B. Harnett, of the Hickey & Nicholson Tobacco Company, Limited, respecting alleged infraction of the provisions of the Inland Revenue Act, and of the regulations in respect of tobacco and cigars and tobacco and cigar manufactories, by Messrs. T. B and D. J. Riley, of Charlottetown, or one of them. Also a copy of the reports of William Caven and other officials and collectors of Inland Revenue; and of all correspondence, letters and telegrams between the said T. B. and D. J. Riley, or either of them, and the Government, or any department, or officer thereof; and of all correspondence between the officers of Inland Revenue in Charlottetown and the Government or any department or official thereof, respecting said alleged infraction of said Act or regulations; and all other correspondence, statements and information in possession of the Government relating to the matter aforesaid; together with a statement of the moneys paid voluntarily or otherwise in settlement or otherwise of penalties for such infraction of the law, to whom paid, and the date of payment. Presented 16th March. 1908.—*Mr. McLean (Queen's)*.. .. ..*Not printed.*

158. Papers relating to Trade Conference at Barbados. Presented 10th March, 1908, by Hon. W. S. Fielding.... .. ..*Not printed.*

159. Return to an order of the House of Commons, dated 29th January, 1908, for a copy of all applications, tenders, correspondence, telegrams, or written communications of any kind, in connection with the sale of certain lands in the Ocean Man, Pheasant Rump, and Chasastapsin Indian Reserves, on the 15th November, 1901; together with a copy of advertisements of sales, the names of the newspapers in which they were inserted, and the dates of insertion. Presented 12th March, 1908.—*Mr. Lake*.. .. .. ..*Not printed.*

160. Return to an order of the House of Commons, dated 22nd January, 1908, showing how many fire extinguishers were purchased by the Government for the different departments of the public service since the 30th June, 1906, to January 1st, 1908; from whom they were purchased, and at what price; and the total amount paid for the same. Presented 12th March, 1908.—*Mr. Taylor*.. .. ..*Not printed.*

160*a*. Supplementary Return to an order of the House of Commons, dated 22nd January, 1908, (as far as the Department of Marine and Fisheries is concerned), showing how many fire extinguishers were purchased by the Government for the different departments of the public service since the 30th of June, 1906, to 1st January, 1908; from whom they were purchased, and at what price; and the total amount paid for the same. Presented 26th March, 1908.—*Mr. Taylor*.. .. ..*Not printed.*

161. Return to an order of the House of Commons, dated 22nd January, 1908, for a copy of all letters, correspondence, plans, surveys, estimates, &c., in connection with the proposal to open a waterway in St. Anicet and Ste. Barbe, in the county of Huntingdon, from Lake St. Francis to St. Louis River. Presented 12th March, 1908.—*Mr. Walsh. (Huntingdon)*.. .. ..*Not printed.*

162. Return to an order of the House of Commons, dated 12th March, 1908, for copies of all correspondence between the Auditor General and the Department of Marine and Fisheries, concerning the travelling expenses of Commander Spain in 1905-6. Presented 12th March, 1908.—*Hon. L. P. Brodeur*.. .. ..*Not printed.*

CONTENTS OF VOLUME 19—*Continued.*

163. Return to an order of the House of Commons, dated 12th February, 1908, showing: 1. The total revenue of Belleville, Ontario, Harbour, for the years 1903, 1904, 1905, 1906 and 1907. 2. The expenditure for the years above-mentioned in the harbour; (*a*) for salaries, and to whom, (*b*) dredging in each year; (*c*) for building retaining walls along the river at entrance of harbour; and (*d*) to whom or what persons such last-named sums were paid. 3. What money, if any, the Government has advanced to the Harbour Commissioners of Belleville for improvements, how much and when. 4. If any money has been advanced, what security the Government holds for repayment of the same. 5. The tenders received for building the retaining walls for improvement of Belleville Harbour, the tenderers, the amount of each tender, and to whom the contract was awarded. Presented 13th March, 1908.—*Mr. Porter*.. .. ..*Not printed.*

164. Copy of the order in council appointing Mr. Richard L. Drury, of Victoria, B.C., as a special officer of the Immigration Branch of the Department of the Interior in Japan. Presented 17th March, 1908, by Sir Wilfrid Laurier.. .. ..*Not printed.*

165. Return to an order of the House of Commons, dated 19th February, 1908, for a copy of all letters, telegrams, reports, documents and papers (so far as the same are not of a confidential character) in relation to the trial and conviction of one Frederick Blunden, for cattle stealing at Macleod, in the province of Alberta, in 1904. Presented 19th March, 1908.—*Mr. Ward*.. .. ..*Not printed.*

166. Return to an order of the Senate, dated the 17th March, 1908, for a copy of the Minutes of the meeting of the Standing Committee of the Senate on Railways, Telegraphs and Harbours, held on the 21st and 22nd of May, 1901, be laid on the table. Presented 18th March, 1908.—*Hon. Mr. Landry*.. .. ..*Not printed.*

167. Return to an order of the House of Commons, dated 23rd March, 1908, for a copy of the interim report of the commissioner appointed to investigate alleged irregularities at Sorel in connection with construction of piers on Lake St. Peter. Presented 23rd March, 1908.—*Hon. L. P. Brodeur*.. .. ..*Not printed.*

168. Return to an order of the House of Commons, dated 20th January, 1908, showing all fines imposed for violation of the Fisheries Act in Division No. 2, Nova Scotia, comprising the counties of Antigonish, Colchester, Cumberland, Guysborough, Halifax, Hants and Pictou, showing the amount of each fine, dates on which same were imposed and paid, the place of trial in each case, the offence charged, and the names of the convicting justices or fishery officers. Presented 23rd March, 1908.—*Mr. Sinclair.*
Not printed.

169. Return to an address of the House of Commons, dated 11th March, 1908, for a copy of all orders in council, reports, correspondence, documents, letters and papers not already brought down, relating to a grant by His Majesty of any Indian reserves in the province of British Columbia to the Grand Trunk Pacific Railway Company, or to any officer of the company, or to any person on behalf of that company. Presented 24th March, 1908.—*Mr. Borden (Carleton)*.. .. ..*Printed for sessional papers*

170. Return to an order of the House of Commons, dated 20th January, 1908, showing the amount paid each year for provisions on each of the Government steamers for the last three fiscal years, the average complement of officers and men provisioned on each for each year, and the cost per man per day. Presented 24th March, 1908.—*Mr. Foster.*
Not printed.

171. Return to an order of the House of Commons, dated 12th February, 1908, for a copy of all petitions and correspondence relating to the establishment of a post office at Mill Settlement, West, and also at north side of Newcastle Creek, in the electoral division of Sunbury and Queen's. Presented 26th March, 1908.—*Mr. Wilmot*.. .. ..*Not printed.*

CONTENTS OF VOLUME 19—*Continued.*

171*a*. Return to an order of the House of Commons, dated 11th March, 1908, for a copy of all letters, petitions, correspondence and other papers in connection with the application to establish a post office at North Grove, in the county of Grenville. Presented 3rd April, 1908.—*Mr. Reid (Grenville)*.. .. ..*Not printed.*

171*b*. Return to an order of the House of Commons, dated 29th January, 1908, for a copy of all letters, telegrams and petitions, in possession of the Government, or any member or official thereof, respecting the dismissal of Mrs. Mary Finlay as postmistress at the head of St. Peter's Bay, and the appointment of her successor. Presented 3rd April, 1908.—*Mr. Martin (Queen's)*.. .. ..*Not printed.*

171*c*. Return to an order of the House of Commons, dated 18th December, 1907, showing the number of post offices receiving daily, tri-weekly, semi-weekly, and weekly mails, in each county of the provinces of New Brunswick and Nova Scotia, and the total postal revenue and expenditure in each of said counties. Presented 3rd April, 1908.—*Mr. Crocket*.. .. ..*Not printed.*

171*d*. Return to an order of the House of Commons, dated 16th March, 1908, for a copy of all correspondence, telegrams, petitions, &c., in possession of the Government or any member or official thereof, respecting the dismissal of Archibald McDonald as postmaster at Whim Road Cross, Prince Edward Island, and the appointment of William McGinnon as his successor. Presented 3rd April, 1908.—*Mr. Martin (Queen's).*
Not printed.

171*e*. Return to an order of the House of Commons, dated 11th December, 1907, showing what complaints respecting the inadequacy of postal service or delays therein, or respecting lack of or defects in postal facilities or means of communications, have been received by the Post Office Department since the 1st day of January, 1907, and the general nature of such complaints. Presented 29th April, 1908.—*Mr. Armstrong.*
Not printed

171*f*. Return to an order of the House of Commons, dated 9th March, 1908, for a copy of al petitions, letters of recommendation, written requests and correspondence with the government in connection with the opening of a Post Office Savings Bank in the post office at St. Gabriel de Brandon, in the province of Quebec. Presented 29th April, 1908.—*Mr. Monk*.. .. ..*Not printed.*

171*g*. Return to an order of the House of Commons, dated 9th March, 1908, for a copy of all correspondence, telegrams, petitions with signatures thereto, in possession of the Government, or any member or official thereof, respecting the removal of a post office from Angus McDonald's place in Pisquid, Prince Edward Island, to Russell Birt's, of the same place. Presented 29th April, 1908.—*Mr. Martin (Queen's)*.. .. .. ..*Not printed.*

171*h*. Return to an order of the House of Commons, dated 16th March, 1908, for a copy of all correspondence ,telegrams and petitions in the possession of the Government or any member or official thereof, respecting the dismissal of Alex. McLeod in 1905, as postmaster at Valleyfeld East, Prince Edward Island, and the appointment of his successor. Presented 29th April, 1908.—*Mr. McLean (Queen's)*.. .. ..*Not printed*

171*i*. Return to an address of the House of Commons, dated 26th February, 1908, for a copy of all correspondence, telegrams, reports, memoranda, resolutions and any information in the possession of the Government, relating to changes in postal charges or regulations within the past two years, between the United States and Canada. Presented 5th May, 1908.—*Mr. Armstrong*.. .. ..*Not printed*

171*j*. Return to an order of the House of Commons, dated 13th January, 1908, for a copy of all correspondence, telegrams, reports and memoranda, in possession of the Government, or any member or official thereof, respecting the establishment of daily mails and improvement of the mail service in the county of Queen's, Prince Edward Island. Presented 26th May, 1908.—*Mr. Martin (Queen's)*.. .. ..*Not printed.*

CONTENTS OF VOLUME 19—*Continued.*

172. Return to an order of the House of Commons, dated 26th February, 1908, showing what sums of money were paid during the fiscal years 1905-6 and 1906-7 by any department of the Government to the Steel Concrete Company, Limited; for what purpose such payments were made; what orders for work or material to be done or supplied by that company are now being filled, and the aggregate amount payable for same. Presented 26th March, 1908.—*Mr. Boyce*.. .. ..*Not printed.*

173. Return to an order of the House of Commons, dated 9th March, 1908, showing how many renewals of placer claims were granted by the Gold Commissioner at Dawson, on or subsequent to the 1st of August, 1906, at $10 each; why the fee of $15, as required by 6 Edward VII., chapter 39, was not collected in these cases; and what shortages were afterwards collected. Presented 27th March, 1908.—*Mr. Lennox*.. .. ..*Not printed.*

173*a*. Return to an order of the House of Commons, dated 9th March, 1908, showing how many renewals of placer claims were granted by the Assistant Gold Commissioner at Whitehorse on or subsequent to 1st of August, at $10 each; why the fee of $15, as required by 6 Edward VII., chapter 39, was not collected in these cases; and what shortages have been collected. Presented 30th March, 1908.—*Mr. Lennox*..*Not printed.*

174. Return to an order of the House of Commons, dated 8th January, 1908, showing: 1 What sums of money have been paid for advertising and printing, respectively, to the *Sun* and *Star* newspapers of St. John, N.B., the *Chronicle* of Halifax, the *Echo* and the Glace Bay *Gazette*, and the St. John *Globe*, during the following periods respectively: the fiscal years 1904-5, 1905-6, and from June 30, 1906, to date. 2. In what offices or job offices the printing is done for the *Sun, Star, Chronicle* and *Echo*. Presented 30th March, 1908.—*Mr. Foster*... .. ..*Not printed.*

174*a*. Return to an order of the House of Commons, dated 13th June, 1908, showing all sums of money paid by the Government, or any department or official thereof, during the years 1902, 1903, 1904, 1905, 1906 and 1907, for advertising, printing, or for any other purpose, or on any other account whatever, to the *Sault Express*, a newspaper published at Sault Ste. Marie, Ontario, or to any person or persons, firm or company for or in respect of any work done by said newspaper for the Government, or any department or official thereof; also showing what amounts, if any, are disputed and unpaid, and showing for what purpose such moneys were paid, and accounts were incurred, respectively, and by what departments, or officials of the Government. Presented 30th March, 1908.—*Mr. Boyce*.. .. ..*Not printed.*

174*b*. Return to an order of the House of Commons, dated 22nd January, 1908, showing what amount has been paid by the Dominion Government for all purposes, from 1st January, 1901, to 1st January, 1908, to the following papers: *Alberta Star*, Cardston; *Lethbridge Herald, Macleod Advance, Nanton News, The Frank Paper*. Presented 30th March, 1908.—*Mr. Herron*.. .. ..*Not printed.*

175. Return to an order of the House of Commons, dated 15th January, 1908, showing the various services on which Mr. Shepley, K.C., has been engaged by the Government since 1896, and the amount that has been paid him for salary and expenses for each. Presented 30th March, 1908.—*Mr. Foster*.... .. ..*Not printed.*

176. Return to an address of the House of Commons, dated 16th March, 1908, for a copy of all orders in council, letters, telegrams, correspondence and papers of every description and nature relating to the appointment of the Hon. Arthur Drysdale as justice of the Supreme Court of Nova Scotia, and especially all such documents as relate to the date of his acceptance of said appointment or the date of his declaration of intention to accept the same. President 30th March, 1908.—*Mr. Taylor*.. .. ..*Not printed.*

177. Return to an order of the House of Commons, dated 23rd March, 1908, showing how much has been paid to C. Boone or the Boone Company, since 1896, and the amount paid for work in each year at each point where same was performed by said party, firm or company. Presented 30th March, 1908.—*Mr. Bennett*.. .. ..*Not printed.*

CONTENTS OF VOLUME 19—*Continued.*

178. Maps and plans in connection with the Montreal, Ottawa and Georgian Bay Canal. Presented 30th March, 1908, by Hon. W. Pugsley.. .. ..*See 178b.*

178*a*. Further maps and plans in connection with the Montreal, Ottawa and Georgian Bay Canal. Presented 13th May, 1908, by Hon. W. Pugsley.. .. ..*See 178b.*

178*b*. Return to an order of the House of Commons, dated 6th July, 1908. Report of the engineer on the Georgian Bay Ship Canal, together with estimates, plans, &c., illustrating the project in its main features. Presented 6th July, 1908.—*Hon. W. Pugsley.*
Printed for both distribution and sessional papers.

179. Return to an order of the Senate, dated the 12th February, 1908, for a copy of: 1. The number of convicts under the age of twenty, and their respective nationalities. 2. The number of convicts from the age of twenty and upwards, and their nationalities, in each of the penitentiaries under Dominion control, for the years 1903, 1904, 1905, 1906 and 1907. Presented 31st March, 1908.—*Hon. Mr. Comeau.. .. ..Not printed.*

180. Return to an order of the Senate, dated the 18th February, 1908, showing with respect to the two routes of the Transcontinental Railway that were surveyed between Grand Falls and Chipman, in the province of New Brunswick, the estimated cost of each of the lines, that is to say: 1. The "Back Route," so-called. 2. The St John Valley route. With the following details: (*a*) Cubic yards of ordiuary excavation and fills; (*b*) cubic yards of loose rock; (*c*) cubic yards of solid rock; (*d*) cubic yards of concrete; (*e*)miles of steel trestle and cost; (*f*)number and cost of bridges. And with respect to the "Back Routes," giving the last-mentioned details as regards the following subdivisions of that route: 1. Grand Falls and Tobique River. 2. Tobique River aud Intercolonial Railway. 3. Intercolonial Railway and Chipman. And is it the intention to adopt a pusher grade in the route selected? Presented 31st March, 1908.—*Hon. Mr. Thompson.. .. ..Not printed.*

181. Return to an order of the House of Commons, dated 6th February, 1907, for a copy of all letters, accounts, vouchers, cheques, correspondence and documents relating to any amount paid to Mr. R. T. McIlreith, barrister, of Halifax, for legal services, by the Government of Canada, during each of the fiscal years ending, respectively, 30th day of June, 1902, 1903, 1904, 1905 and 1906. Also relating to all amounts similarly paid to auy legal agent or representative of the Government at Halifax during each of the fiscal years ending respectively, 30th Juue, 1891, 1892, 1893, 1894, 1895, 1896 and 1897. Presented 1st April, 1908.—*Mr. Crocket.. .. ..Not printed.*

181*a*. Supplementary return to No. 181. Presented 3rd April, 1908.. .. ..*Not printed.*

182. Copy of order in council relative to the appointment of the Honourable Walter Cassels, a commissioner to investigate and report upon certain statements contained in the Report of the Civil Service Commission, reflecting upon the integrity of the officials of the Department of Marine and Fisheries. Presented 2nd April, 1908, by Sir Wilfrid Laurier.. .. ..*Not printed.*

182*a*. Correspondence between Sir Wilfrid Laurier and the Honourable Mr. Justice Cassels on the subject of the appointment of the latter to investigate and report upon certain statements contained in the Report of the Civil Service Commission, reflecting on the integrity of the officials of the Department of Marine and Fisheries. Presented 7th April, 1908, by Sir Wilfrid Laurier.. .. ..*Not printed.*

182*b*. Correspondence between the Honourable Mr. Aylesworth and the Honourable Mr. Justice Cassels on the subject of the appointment of the latter to investigate and report upon certain statements contained in the Report of the Civil Service Commission, reflecting on the integrity of the officials of the Department of Marine and Fisheries. Presented 19th April, 1908, by Sir Wilfrid Laurier.. .. ..*Not printed.*

182*c*. Letter of instructions from the Minister of Justice to George H. Watson, Esq., K.C, respecting the appointment of the latter as counsel to act with Honourable Mr. Justice Cassels in the investigation upon certain statements contained in the Report of the

CONTENTS OF VOLUME 19—*Continued.*

Civil Service Commission, reflecting on the integrity of the officials of the Department of Marine and Fisheries. Presented 1st May, 1908, by Hon. A. B. Aylesworth. *Not printed.*

182*d*. Return to an order of the House of Commons, dated 15th January, 1908, showing all commissions of inquiry appointed between 1896 and 1908, the dates of appointment thereof, the names of the commissioners appointed and the secretary and counsel, or others appointed to assist them, the purpose or object of each such commission, the date of report of each such commission, what legislation, if any, has been enacted in consequence of such commissions and reports, the cost of each such commission, including salaries, travelling expenses, witness fees, fees of counsel, and other assistants, and for printing, distinguishing each separately. Presented 5th May, 1908.—*Mr. Porter. Not printed.*

183. Return to an order of the House of Commons, dated 18th December, 1907, showing the various Marconi stations established by the Government, their location, the cost of construction and maintenance of each, the messages sent by each, the rate of tolls and the receipts, and all contracts, reports, papers and correspondence, in connection therewith. Presented 3rd April, 1908.—*Mr. Foster*.. .. ..*Not printed*

183*a*. Supplementary Return to No. 183. Presented 11th May, 1908.. .. ..*Not printed.*

184. Return to an order of the House of Commons, dated 17th February, 1908, showing what quality or quantity of goods or supplies have been furnished by the Office Specialty Company to the Dominion of Canada in every department of the service since 1896, and the total amount for each year. Presented 3rd April, 1908.—*Mr. Bennett*..*Not printed.*

185. Return to an address of the House of Commons, dated 19th February, 1908, for a copy of a memorial addressed to His Excellency the Governor General, respecting a reference to the Privy Council in regard to the constitutionality of the Saskatchewan Act passed by the Legislative Assembly of the province of Saskatchewan on the 23rd May, 1906; together with a copy of all correspondence, telegrams or other communications, relating thereto, between the Dominion Government or any member thereof, and the Government of Saskatchewan or any member thereof. Presented 31st March, 1908.—*Mr. Lake*.. .. ..*Printed for sessional papers.*

186. Return to an order of the House of Commons, dated 29th January, 1908, for a copy of all reports, plans, specifications, tenders, correspondence, telegrams, and all other papers, documents, and other information in connection with the construction of the Hillsboro' Bridge and approaches, including land purchases necessary therefor. Presented 6th April, 1908.—*Mr. Lefurgey*.. .. ..*Not printed.*

187. Return to an order of the House of Commons, dated 10th February, 1908, showing what action, if any, has been taken by this Government since 19th March, 1903, which would have for its object the removal of the cattle embargo upon Canadian cattle entering Great Britain. 2. For a copy of a resolution said to have been passed some years ago by the committee on agriculture, which requested that the Minister of Agriculture of the Dominion should invite the ministers of the different provinces in the Dominion to form themselves into a committee, whose object was to lay before the Government of Great Britain the importance of removing the cattle embargo. 3. Also showing what efforts, if any, have been made by the Minister of Agriculture to comply with the wishes of the above-named committee so expressed; together with a copy of the report, if any, of the same to the House, and what efforts have been so made; with what reason, if any, the Government assigns for not taking action in the matter. Presented 6th April, 1908.—*Mr. Armstrong*.. .. ..*Not printed.*

188. Census and Statistics, Bulletin V., Agricultural Census of Ontario, Quebec and the Maritime Provinces, 1907. Presented 6th April, 1908, by Hon. S. A. Fisher..*Not printed.*

CONTENTS OF VOLUME 19—*Continued.*

189. Return to an address of the House of Commons, dated 30th March, 1908, for a copy of all memorials, documents, telegrams, and correspondence between the government of Prince Edward Island and the Government of Canada since 30th June, 1904, with respect to the non-fulfilment of the terms of union and for claims for damages in respect thereof. Presented 7th April, 1908.—*Mr. McLean (Queen's).. .. ..Not printed.*

190. Return to an order of the House of Commons, dated 17th February, 1908, for a copy of all correspondence, telegrams, reports, memoranda, resolutions, and any other information in possession of the Government or any member or official thereof, respecting the construction of branch railway lines in Prince Edward Island. Presented 13th April, 1908.—*Mr. Martin (Queen's).. .. .. .

CONTENTS OF VOLUME 19—*Continued.*

statement showing what was the daily pay paid to the soldiers of these two corps and that which the militiamen belonging to Company No. 2 of the Ottawa Field Battery received at the same time, or that which was received by other corps of the Military District of Ottawa, which were also called out for active service. Presented 8th April, 1908.—*Hon. Mr. Landry*.. .. ..*Not printed.*

197. Return to an address of the House of Commons, dated 16th March, 1908, for a copy of all orders in council, reports, memoranda, agreements, contracts and other documents and papers of every kind, nature and description, from the 1st of January, 1900, up to the present time, relating to or touching the Dolkese or Dokis Indian reserve, or touching the surrender thereof of the timber thereon, and especially all such documents as aforesaid as relate to any proposals or arrangements for the surrender of any rights by the Indians in the said reserve or in the timber thereon, or to the sale or disposal of the said timber or any part thereof. Presented 9th April, 1908.—*Mr. Borden (Carleton).* *Not printed.*

197*a*. Supplementary return to No. 197. Presented 2nd July, 1908.. .. ..*Not printed.*

197*b*. Return to an order of the House of Commons, dated 23rd March, 1908, for a copy of all opinions of the Minister of Justice, or Deputy Minister of Justice, or any official of the Department of Justice, to the Minister of the Interior or any official of the Department of the Interior, with respect to the Metlakatla and Songhees Indian reserves, or either of the said reserves, since the 1st day of January, 1906. Presented 22nd April, 1908.—*Mr. Borden (Carleton)*.. .. ..*Not printed.*

197*c*. Return to an order of the House of Commons, dated 6th April, 1908, for a copy of all petitions, memorials, documents, correspondence and papers touching any matters, transactions or negotiations between the Department of Indian Affairs and the council of the Six Nations reserve, or the chief or chiefs of the said council or the Indian Rights Association or Warriors' Association, from the 1st day of January, 1906, to the present time. Presented 18th May, 1908.—*Mr. Lake*.. .. ..*Not printed.*

198. Return to an order of the House of Commons, dated 11th March, 1908, for a copy of contract and all correspondence in connection with purchase of cement from E. A. Wallberg, by the Department of Marine and Fisheries, to heighten Heath Point. Presented 13th April, 1908.—*Mr. Staples*.. .. ..*Not printed.*

199. Return to an order of the House of Commons, dated 19th February, 1908, showing: 1. What amount the firm of H. N. Bate & Co has received from each department of the Government since the year 1896 for supplies, giving the amount paid each year separately. 2. What amount the firm of W. C. Edwards & Co. has received from each department of the Government since the year 1896 for supplies, giving the amount paid each year separately. Presented 13th April, 1908.—*Mr. Taylor*.. .. ..*Not printed.*

200. Return to an order of the House of Commons, dated 11th March, 1908, for a copy of all petitions, letters and applications, by or on behalf of "La Société Canadienne d'immigration et de placement," for assistance from the Government, and the answer by the Government or its officials to the same. Presented 13th April, 1908.—*Mr. Monk.* *Not printed*

201. Return to an order of the House of Commons, dated 30th March, 1908, for a copy, as it appeared printed in the *Yukon World and Official Gazette* for nine months of the financial year 1906-7, of a synopsis of mining regulations referred to in the Auditor General's Report, 1906-7, at page L—37, and also setting forth the number of times the said advertisement appeared in the newspapers referred to in the time stated. Presented 13th April, 1908.—*Mr. Lennox*.. .. ..*Not printed*

202. Return to an order of the House of Commons, dated 26th February, 1908, for a copy of all correspondence, leases or other papers in connection with the leasing or proposed leasing of Kananaski Falls, on the Bow river. A copy of all correspondence and other

CONTENTS OF VOLUME 19.—*Continued.*

papers in connection with the selling or otherwise disposing of 1,000 acres or any lands to the Calgary Power and Transmission Company (Limited). A statement showing an estimate of about the number of acres and territory owned by the Stony Indian Reserve, held in trust for the Indians, the said statement showing the quantity on each side of Bow river. Presented 13th April, 1908.—*Mr. Reid (Grenville).. .. ..Not printed.*

203. Return to an address of the House of Commons, dated 29th January, 1908, for a copy of all correspondence, telegrams, memoranda and reports, between the Government and its officers and solicitors and the provincial or territorial governments, in regard to the cases taken to test the liability for taxation of the Canadian Pacific Railway Company in the cases Rural Municipality of North Cypress vs. Canadian Pacific Railway; Rural Municipality of Argyle vs. Canadian Pacific Railway; Springdale School District vs. Canadian Pacific Railway; together with copies of all judgments of the courts before whom the cases were tried, and of the refusal of the Judicial Committee of the Privy Council of the application for leave to appeal to that court. Presented 21st April, 1908.—*Mr. Lake.. .. ..Not printed.*

204. Copy of a Report of the Privy Council approved by His Excellency the Administrator on the 21st April, 1908, on a memorandum dated 20th April, 1908, from the Minister of Public Works, recommending that the order in council of the 30th March, 1908, providing for the continuation of certain contracts therein mentioned for dredging at various places in the provinces of Ontario and Nova Scotia be cancelled. Presented 23rd April, 1908, by Hon. W. Pugsley.. .. ..*Not printed.*

205. Return to an order of the House of Commons, dated 27th April, 1908, showing claims for damages to property, or personal injury or loss or damage on the Intercolonial Railway, which have been settled since 1st January, 1908; nature of the claims so settled; amount of damage claimed in each case; the settlements arrived at, and the names of the persons so settled with. Presented 27th April, 1908.—*Hon. G. P. Graham. Not printed.*

205*a*. Return to an order of the House of Commons, dated 6th April, 1908, for a copy of the Report of the Deputy Minister of Railways and Canals, and the Deputy Minister of Marine and Fisheries in reference to their meeting with delegates of the Boards of Trade of Prince Edward Island at Charlottetown in June last, to take into consideration the removal of the heavy freight and passenger rates on the Prince Edward Island Railway and the Intercolonial Railway, and on freight and passenger rates to and from Prince Edward Island; also all correspondence, telegrams, &c., in possession of the Government or any member or official relating thereto, and other questions discussed at said meeting. Presented 27th April, 1908.—*Mr. Martin (Queen's).Not printed.*

205*b*. Return to an order of the House of Commons, dated 30th March, 1908, for a copy of all letters, telegrams and other documents relating to an accident which happened at Mulgrave, Nova Scotia, on the 3rd of December last, whereby Captain James Forrestall lost his life; and also the evidence taken at the investigation subsequently held by officers of the department and the report made thereon. Presented 7th May, 1908.—*Mr. Sinclair.. .. ..

CONTENTS OF VOLUME 19—*Continued.*

205*e*. Return to an order of the House of Commons, dated 6th April, 1908, showing the number of tons of new steel rails lying along the line of the Intercolonial Railway unused, date when purchased, if required, and when to be used. Presented 18th May, 1908.—*Mr. Reid (Grenville)*.. .. ..*Not printed.*

205*f*. Return to an order of the House of Commons, dated 6th April, 1908, showing the number of locomotives in service on the Intercolonial Railway on the several Sundays in the months of October, November and December, 1907, hauling freight trains. Presented 18th May, 1908.—*Mr. Reid (Grenville)*.. .. ..*Not printed.*

205*g*. Return to an order of the Senate, dated the 12th May, 1908, for a copy of all the correspondence exchanged in 1906 and 1907, between Mr. L. C. A. Casgrain, of Nicolet, and Messrs. J. Butler, Deputy Minister of Railway and Canals, and T. C. Burpee, engineer, or any other persons in the Department of Railways and Canals, on the subject of the fences along the line of the Intercolonial Railway across the county of Nicolet and the neighbouring counties. Presented 21st May, 1908.—*Hon. Mr. Landry*.. .. ..*Not printed.*

205*h*. Return to an order of the House of Commons, dated 10th June, 1908, for copies of all accounts, vouchers, correspondence and other papers relating to a payment of $8,399.68 to K. Falconer in connection with New Accounting System on Government Railways, as set out at Page W—192, Report Auditor General, 1906. Presented 10th June, 1908.—*Hon. G. P. Graham*.. .. ..*Not printed.*

205*i*. Return to an order of the House of Commons, dated 6th April, 1908, for a copy of all correspondence, telegrams, reports and recommendations in possession of the Government, or any member or official thereof, with respect to improved railway service on the Belfast and Murray Harbour Branch Railway. Presented 10th June, 1908.—*Mr. Martin (Queen's)*.. .. ..*Not printed.*

206. Return to an order of the House of Commons, dated 18th March, 1908, for a copy of all papers necessary to bring the information contained in Sessional Paper No. 90, 1907, up to date. (Robins Irrigation Company.) Presented 28th April, 1908.—*Mr. Imes.* *Not printed.*

207. Certified copies of Reports of the Committee of the Privy Council, dated 30th March, 1908, and 16th April, 1908, approved by His Excellency the Administrator, and of the 28th April, 1908, approved by His Excellency the Governor General, on certain estimates of expenses in connection with the celebration of the founding of Quebec by Samuel de Champlain, submitted by the National Battlefields Commission for the sanction and approval of the Governor General in Council. Presented 30th April, 1908, by Sir Wilfrid Laurier.. .. ..*Printed for sessional papers.*

208. Return to an order of the House of Commons, dated 6th April, 1908, for a copy of all correspondence, reports, telegrams, resolutions, petitions, &c., in possession of the Government or any member or official thereof, respecting the demand of the Charlottetown Board of Trade or any person in Prince Edward Island, for federal legislation to give sailing vessels and steamers equal rights in their proper loading turns at the coal ports in Nova Scotia and Cape Breton. Presented 5th May, 1908.—*Mr. Martin (Queen's).* *Not printed.*

209. Return to an address of the Senate, dated 10th April, 1908, showing: 1. The number of automatic low pressure acetylene gas buoys which have been purchased by the Government during the years 1904-5-6-7 from the International Marine Signal Company, of Ottawa, giving each year separate, and the prices paid for the same. 2. Whether tenders were called for their supply; if so how many tenders were received, from whom, and the prices at which they were offered. 3. How many other gas buoys, beacons, whistling buoys and light appliances were purchased from the same company during the same period of time, the prices paid for the same; whether any tenders were called for; if so, the names of the tenderers and the prices asked. 4. The quantity of the carbide purchased by the Government during the years 1903-4-5-6-7, the price paid, from

CONTENTS OF VOLUME 19—*Continued.*

whom purchased and whether by tender or otherwise. Presented 6th May, 1908.—*Hon. Sir Mackenzie Bowell*.. .. .. .

CONTENTS OF VOLUME 19—*Continued.*

217. Return to an order of the House of Commons, dated 11th December, 1907, for a copy of all correspondence, contracts and appointments of overseers in respect to Port Burwell Harbour, in the county of Elgin, Ontario, since 1st January, 1907; also a return showing pay-sheets, amount of new material used, from whom purchased, of all day or contract work on the said harbour, giving names of overseers and by whom appointed for the same. Presented 26th May, 1908.—*Mr. Marshall*.. .. ..*Not printed.*

218. Return to an order of the House of Commons, dated 6th May, 1908, showing the names of all persons who furnished supplies to the steamer *Petrel* between the 31st March, 1907, and 30th April, 1908, the amount paid to each such person, and the date of each payment. Presented 4th June, 1908.—*Mr. Chisholm (Huron)*.. .. ..*Not printed.*

219. Return to an order of the House of Commons, dated 19th February, 1908, (*a*) showing the revenue contributed by the province of British Columbia for each and every year from 1872-3 to 1905, inclusive, under the following heads: 1. Customs. 2. Chinese Immigration. 3. Inland Revenue, Excise, Weights and Measures, Gas Inspection, Electric Light Inspection, Methylated Spirits, Sundries. 4. Post Offices. 5. Public Works, Telegraphs, Esquimalt Graving Dock, Casual. 6. Experimental Farm. 7. Penitentiary. 8. Marine and Fisheries, Sick Mariners' Fund, Steamboat Inspection, examination of Masters and Mates, Casual and Harbours, Fisheries. 9. Superannuation. 10. Dominion Lands and Timber. 11. Vancouver Assay Office. 12. Miscellaneous. 13. Public Debt. 14. Any other source. And (*b*)showing expenditure by the Dominion of Canada on account of the province of British Columbia, for each and every year from 1872-3 to 1905, inclusive, under the following heads : 1. Public Debt. 2. Charges of Management. 3. Lieutenant Governor. 4. Administration of Justice, Judges, &c. 5. Penitentiary. 6. Experimental Farm. 7. Quarantine. 8. Immigration. 9. Pensions, &c. 10. Militia. 11. Public Works, Buildings, Harbours and Rivers, Dredging. 12. Telegraphs, Agency. 13. Mail subsidy. 14. Marine and Fisheries, Dominion Steamers, Lighthouses, Meteorological Marine Hospital, Steamboat Inspection, Miscellaneous, Fisheries, Fisheries Inspection, Hatcheries. 15. Indians. 16. Subsidies. 17. Dominion Lands. 18. Customs. 19. Inland Revenue, Excise, Weights and Measures, Gas and Electric Light. 20. Esquimalt Dry Dock. 21. Post Office. 22. Chinese Immigration. 23. Defences, Esquimalt. 24. Chinese Immigration Inquiry. 25. Bounty on Minerals. 26. Miscellaneous. 27. Vancouver Assay Office. 28. Railway Subsidies. 29. Any other source. Presented 10th July, 1908.—*Mr. Ross (Yale-Cariboo)..Printed for distribution.*

220. Return to an order of the House of Commons, dated 3rd February, 1908, showing during the last ten years how much money has been expended by years by this Government for printing and lithographing done outside of Canada; and for what reason such work was done out of Canada. Presented 4th June, 1908.—*Mr. Macdonell..Not printed.*

221. Return to an order of the House of Commons, dated 5th June, 1908, for a copy of the evidence taken in the *Montcalm-Milwaukee* collision case, and a copy of the decision of the wreck commissioner and of the assessors on the collision. Presented 5th June, 1908.—*Hon. L. P. Brodeur*.. .. ..*Not printed.*

222. Return to an order of the House of Commons, dated 13th January, 1908, for the production of the following: 1. A copy of the appointment of Doctor Edmond Savard, of Chicoutimi, as paymaster for the county of Chicoutimi. 2. A copy of the instructions given to him as such regarding the validity of the receipts. 3. A copy of all correspondence that took place between Doctor Edmond Savard and the Department of Public Works of Canada in regard to the St. Fulgence pier, in the county of Chicoutimi. 4. A copy of all correspondence that took place between the Auditor General and the Department of Public Works regarding the said Doctor Edmond Savard, paymaster, concerning the St. Fulgence pier. 5. A copy of all the pay lists in connection with the said St. Fulgence pier during the period of time that the said Doctor Savard

CONTENTS OF VOLUME 19—*Continued.*

was paymaster. 6. A copy of all the pay lists for works done to the wharfs of Chicoutimi and St. Alexis during the time that the said Doctor Savard was paymaster. Presented 9th June, 1908.—*Mr. Bergeron*.. .. ..*Not printed.*

223. Return to an order of the House of Commons, dated 11th March, 1908, showing: 1. All lands or interests in lands granted by the Government to the Temperance Colonization Society, together with the dates of such grants, description of lands granted, consideration paid, or terms upon which such lands were granted, and all other particulars of sale. 2. Showing the terms of settlement or otherwise upon which such lands were granted, or held by the Society, and the conditions or regulations in force from time to time regarding such grants, and the holding thereof respectively. 3. Showing wherein or in what respect and with respect to what lands, the said Society lived up to, and complied with such conditions and regulations, and wherein the Society failed to comply therewith. 4. Showing what lands, if any, have been reclaimed by the oGvernment from the Society for such non-compliance with such terms and conditions, or for any other cause or reason. 5. Showing what lands the said Society still hold, as far as known. 6. Showing whether the said Society is still in existence, and if so, who compose the same as far as known. 7. Also for a copy of all correspondence, reports, memoranda, orders in council, or other documents in possession of the Government, relating to the said Society or the lands granted thereto. Presented 10th June, 1908.—*Mr. Macdonell*.. .. ..*Not printed.*

224. Return to an order of the House of Commons, dated 13th January, 1908, showing the number of men and the quantity of supplies, material and mails transported on Government account over the Qu'Appelle, Long Lake and Saskatchewan Railway, the Calgary and Edmonton Railway, the Lake Manitoba Railway and Canal Company, and the Winnipeg Great Northern Railway, with the cost of same at current transport rates, since the beginning of the contract arrangements made with each, up to date. Presented 17th June, 1908.—*Mr. Foster*.. .. ..*Not printed.*

225. Supplementary Return to an order of the House of Commons, dated 17th December, 1906, for: 1. A copy of all leases and agreements between the Government, represented by the Department of Marine and Fisheries, and (*a*) the Athabasca Fish Company (J. K. McKenzie, Selkirk, Manitoba), or their assigns, Messrs. Butterfield & Dee; (*b*) A. McNee, Windsor, Ontario; (*c*) the British American Fish Corporation, of Montreal and Selkirk (F. H. Markey). 2. A copy of all reports, correspondence or documents, relating to or touching upon the application for securing of, transfer of, or enjoyment of any privileges under said leases. 3. A statement of all rentals, bonuses, or payments to the Government in respect of such leases to date. 4. All information in the possession of or procurable by the Government with reference to (*a*) the number of tugs, boats and men employed; (*b*) the quantity and value of nets used; (*c*) the number and value of fish taken; (*d*) the quantity of fish exported under each of said leases during the last period of twelve months, for which such figures are available. Presented 26th June, 1908.—*Mr. Ames*.. .. ..*Not printed.*

226. Return to an order of the House of Commons, dated 23rd March, 1908, for a copy of all contracts, papers and other documents between the Government or the Department of Militia and Defence, or any member thereof, or any one acting for or on its behalf, and the Sutherland Rifle Sight Company, or any one acting for or on its behalf, relating to the purchase of rifle sights or any other materials. Presented 26th June, 1908—*Mr. Worthington*.. .. ..*Not printed.*

227. Return to an order of the Senate, dated 18th June, 1908, showing the tonnage entered at St. John, N.B., and Halifax, N.S., for the years 1905, 1906 and 1907. Also the value of imports for the same years at St. John, N.B., and Halifax, N.S., and also the value of exports for same year from St. John, N.B., and Halifax, N.S. Presented 7th July, 1908.—*Hon. Mr. Domville*.. .. ..*Not printed.*

CONTENTS OF VOLUME 19—*Continued.*

228. Return to an order of the House of Commons, dated 13th July, 1908, for a copy of a memorandum by Major General P. H. N. Lake, C.B., C.M.G., Inspector General, upon that portion of the Report of the Civil Service Commissioners, 1908, which deals with the Military Administration of the Militia. Presented 13th July, 1908.—*Sir Frederick Borden*.. .. .. .

CONTENTS OF VOLUME 19—*Concluded.*

234. Copy of a telegram from the Canadian Manufacturers' Association relative to the woollen industries, and Sir Wilfrid Laurier's reply thereto. Presented 18th July, 1908, by Sir Wilfrid Laurier.. .. .. *Not printed.*

234*a*. Correspondence, &c., from the Canadian Manufacturers' Association relating to the woollen industries in Canada. Presented 20th July, 1908, by Sir Wilfrid Laurier. *Not printed.*

235. Return to an order of the Senate, dated 6th May, 1908, calling for copies of all correspondence with the Department of Inland Revenue and officers, referring to analysis of fertilizers and for the decision of the department on questions raised during the years 1906, 1907 and 1908, to date. Presented 18th July, 1908.—*Hon. Mr. Domville.* *Not printed.*

CANADA

REPORT

OF THE

MINISTER OF PUBLIC WORKS

ON THE

WORKS UNDER HIS CONTROL

FOR THE

FISCAL PERIOD ENDED MARCH 31

1907

Submitted in Accordance with the Provisions of Chapter 36, Section 37, of the Revised Statutes of Canada.

PRINTED BY ORDER OF PARLIAMENT

OTTAWA
PRINTED BY S. E. DAWSON, PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1907

[No. 19—1908.]

To His Excellency the Right Honourable Sir Albert Henry George, Earl Grey, G.C.M.G., &c., Governor General of Canada.

My Lord,

I have the honour to lay before Your Excellency the Report of the Department of Public Works of Canada, for the fiscal period ended March 31, 1907.

I have the honour to be,
My Lord,
Your Excellency's most obedient servant,
WILLIAM PUGSLEY,
Minister of Public Works.

Ottawa, November 12, 1907.

CONTENTS

Part I.—DEPUTY MINISTER'S REPORT.

" II.—ACCOUNTANT'S REPORT.

" III.—CHIEF ARCHITECT'S REPORT.

" IV.—CHIEF ENGINEER'S REPORT.

" IV.—APPENDIX 'A,' GEORGIAN BAY SHIP CANAL SURVEY.

" V.—GENERAL SUPT. OF TELEGRAPHS' REPORT.

" VI. –COLLECTOR OF REVENUE'S REPORT.

" VII.—MISCELLANEOUS REPORTS.

ALPHABETICAL INDEX TO REPORT

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
A							
Accountant's report							
Actonvale, P.Q., public building		8, 30					
Acts of Parliament							15
Agassiz, B.C., experimental farm		13, 35					
Agency, Public Works, B.C.		27					
Alberta public buildings		12, 34	36				
Alameda, N.W.T., lands office		12, 34					
Alberni-Cape Beale, telegraphs		26			31, 56		
Alberni-Clayoquot, telegraphs		26			32, 56		
Alexandria, Ont., public building		9, 31	17				
Almonte, Ont., public building		9, 31					
Amaguadees, N.S.		15		3			
Amherstburg, Ont., dredging		22		129			
" public building		9, 31	17				
Amherst, N.S., public building		7, 29					
Amherst, P.Q.		20		83			
Amherst Point, N.S.		15		4			
Amherst, N.S.		15		18			
Andersons Cove, N.S.		15		4			
Andersons Hollow, N.B.		17		60			
Annandale, P.E.I.		17					
Annapolis, N.S., public building		7, 29					
" wharf		15		5			
Anse-à-Benjamin, P.Q.				83			
Anse-à-Beaufils, P.Q.		19					
Anse-à-la-Cave, P.Q.		19		83			
Anse-à-l'Islot, P.Q.		19		83			
Anse-aux-Foins, P.Q.		21		122			
Anse-aux-Gascons, P.Q.		19					
Anse-aux-Griffons, P.Q.		19		84			
Anse-du-Cap, P.Q.		19					
Anse-St.-Jean, P.Q.		19		84			
Anticosti-Gaspé, telegraphs		26			8, 12, 47		
Antigonish, N.S., public building		7, 29	3				
Apple River, N.S.		15		5			
Arbitrations and awards		27					
Architect's reports			1				
" staff		27					
Arichat, N.S., public building		7, 29					
Arisaig, N.S.		15		6			
Armstrong, N.B.		18					
Arnprior, Ont., public building		10, 31					
Aroostook, N.B.		18					
Art Gallery, Ottawa							19
Ashuapmouchouan, P.Q.				85			
Assiniboine River, Man.		23		247			
Ashcroft-Dawson, telegraphs		26			34, 60		
Atlin, B.C., public building		13, 34					
Avonport, N.S.		15		6			
Aylmer, P.Q., public building		8, 30					
B.							
Babin's Cove, N.S.		15		6			
Baddeck, N.S., public building		7, 29					
" wharf		15		7			
Baie des Bacons, P.Q.		19		85			
Baie des Peres, P.Q.		22		128, 204			
Baie St. Paul, P.Q.		19		85			
Bailey's Brook, N.S.		15		7			
Banff, Alta.		33					
Barachois, N.S.		15					
Barachois de Malbaie, P.Q.		19		85			
Barrie, Ont., public building		10, 31	18				
" wharf		22					
Barrington Passage, N.S.		15		7			
" telegraphs		26					
Bassin, P.Q.		20		85			
Batiscan, P.Q.				199			
Bathurst, N.B., public building		8, 29					
Battery Point, N.S.		15		8			

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
B							
Battleford, N.W.T., public buildings		12, 34					
" " bridge		25		270			
Baxter Harbour, N.S.		15		8			
Bay of Fundy, telegraphs		26			8, 19, 47		
Bayfield, N.S.		15		8			
" Ont.		22		129			
Bay Fortune, P.E.I.		17		51			
Bear Cove, N.S.		15		9			
Bear River, N.S., Annapolis Co		15		9			
" Yarmouth Co				9			
Beauharnois, P.Q.		19		199			
Beauport, P.Q., Inland Revenue Bdg.		8					
Beaupre, P.Q.				86			
Beaver River, N.S.		15					
Beaverton, Ont.		22		205			
Belle-Isle, telegraph		26			9		
Belle River, Ont.		22		129, 205			
" P.Q.				123			
Belleville, Ont., harbour		22		205			
" public building		10, 31	18				
Belœil, P.Q.		19		86, 199			
Belyeas, N.B., wharf		18		160			
Berlin, Ont, public building		10, 31	18				
Berthierville, P.Q, harbour		19		199			
" public building		8, 30	9				
Bic, P.Q.		19		87			
Black River, Ont., slides		25					
Black Rock, N.S.		15		12			
Blain de St. Aubin, Mrs., gratuity		27					
Blanche River, Ont.		22		130			
Blanche Shoals, P.Q.		21		199			
Blind River, Ont.		22					
Blue Rock, N.S.		15		10			
Bon Desir, P.Q.		19		83			
Bonaventure, P.Q.		19					
Boisdale, N.S.		15		10			
Boucherville, P.Q.		19					
Bourgeois Inlet, N.S.		15					
Bowmanville, Ont., public building		10, 31					
Boyd, John, gratuity		27					
Bracebridge, Ont.		22		130			
Brae, P.E.I.		17		52			
Brampton, Ont., public building		10, 31	18				
Brandon, Man., public building		12, 33	33				
Brantford, Ont., public building		10, 31					
Breton Cove, N.S.		15		11			
Bridgeburg, Ont., public building		10, 31					
Bridges and roads		25		267			
Bridgewater, N.S.		15		11			
" public building		7					
British Columbia, dredging		24		250			
" dredging plant				155			
" harbours and rivers		24		154			
" public buildings		13, 35	37				
" telegraphs		26			9, 28, 55		
Broad Cove Marsh, N.S.		15		11			
Brockville, Ont., public buildings		10, 31					
Bronte, Ont.		22		130			
Bruce Mines, Ont.		22					
Bryson Bridge,		25					
Buckingham Junction, P.Q.		19		101			
Buckingham, P.Q., public building		8, 30					
" dredging		18					
Buctouche, N.B.		17		61			
Burford, Ont., armoury		10					
Burlington Channel, Ont.		22		131			
C							
Cable Ship *Tyrian*		26			9, 72		
" tariff					36		
Calgary, Alta., public buildings		12, 34	36				
" " bridge		25					
Campbell's Cove, P.E.I.		17		52			
Campbell River, B.C.		24		154			
Campbellton, N.B., public building		8, 29					
" " wharf		17		62, 63			
" " dredging		17		160			
Campobello, N.B.		18					
Canada Creek, N.S.		15		12			

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
C.							
Canning, N.S.				12			
Canne de Roches, P.Q.		19		87			
Canso, N.S., public building		7	3				
Canton Fabre, P.Q.		19					
Cap à l'Aigle, P.Q.		19		87			
Cap à Corbeaux, P.Q.		19		85			
Cape Breton, N.S., telegraph		26			7, 14, 45		
Cap Chat, P.Q.				87			
Cape Cove, P.Q.		19		88			
Cape Sable Island, N.S.		16					
Cape Tormentine, N.B.		17					
Caplan, P.Q.		19					
Cape Ray telegraph		26			7, 11		
Caraquet, N.B.		17		65			
Caretakers, &c.							33
Carleton, N.B., public building		29					
Carleton, P.Q.		19					
Carleton Place, Ont., public building		10, 31					
Carnduff, Alta., public building		12, 34					
Cattle quarantines		12					
Cayuga, Ont., public building		10, 31					
Cedars wharf, N.B.		18		160			
Cement laboratory		27		271			
Chambly Basin, P.Q.		19		199			
Challenger, steamer		27					
Chambord, P.Q.				88			
Charlo's Cove, N.S.		15		13			
Chance Harbour, N.B.		17		66			
Charlottetown, P.E.I., public building		7, 29					
" " ry. wharf, dredging		17		161			
Chateauguay, P.Q.		19		88, 200			
Chatham, N.B., public building		8, 29					
Chatham, Ont., public building		10, 31	18				
Chaudiere bridges, Ottawa		25		267			
Cheticamp, N.S.		15		13			
Chicoutimi, P.Q., public building	6	8	9				
" " wharf		19		88			
" " telegraph					21, 49		
" " dredging		19		200			
Chief Accountant, report		1					
" Architect, report			1				
" " staff		27					
" Engineer, report	9			1			
" " staff		27					
" Officers							23
China Point, P.E.I.		17		53			
Chockfish, N.B.		17		66			
Church Point, N.S.		15		13			
Chutes Cove, N.S.		15		22			
Clarke City, P.Q.		19					
Clerk of works, salaries		14					
Clifton, N.B.		17		81			
Clinton, Ont., post office		10, 31	19				
Coaticook, P.Q., public building		8, 30	9				
Cobourg, Ont., public buildings		10, 31					
" " harbour		22		131			
Cocagne, N.B.		17		66			
Colborne, Ont.				131			
Coleraine, P.Q.		20					
Colchester, Ont.		22		131			
Collector of Revenue	10				1		
Collection of slides and booms dues		25					
Collingwood, Ont.		22		132, 205			
" " graving dock		22					
Columbia River, B.C.		24		154, 155			
Colwell's Creek, N.B.		18					
Colwood, B.C.		35					
Como, P.Q.		19		200			
Contracts let, &c.							6
Coquitlam River, B.C.		24		155			
Corner of the Beach, P.Q.		19					
Cornwall, Ont., public building		10, 31					
Correspondence, official	10						41
Côte Ste. Catherine, P.Q.		19		90			
Coulonge River, P.Q.		25					
Country Harbour, N.S.		15		14			
Courtney River, B.C.		24		156			
Cow Bay, N.S.		15		14			
Craven Dam, N.W.T.				153			
Crapaud, P.E.I.		17		60, 161			

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
C.							
Cribbons Point, N.S.		15					
Crooked Channel, N.S.		15		15			
Cross Lake, N.B.		18					
Cross Point, P.Q.		19					
Culloden, N.S.		15					
Cumberland, Ont.		22		132			
Cumberland, B.C., public building		13					
D.							
Dalhousie, N.B.		17		67			
" public building		8, 29	6				
Dartmouth, N.S., public building		7, 29					
Dauphin, Man., public building		12, 34					
Davidson, N.W.T., immigration building		34					
Davis, J. A., gratuity		27					
Dawson, Y.T., public buildings		35	40				
" telegraph					34, 60		
Deep Waterways Commission		27					
Delaps Cove, N.S		15		16			
Delhaven, N.S.		16					
Delisle, P.Q.		20					
Deputy Minister's report	1						
Descentes des Femmes, P.Q.		20		99			
Deschambault, P.Q.		19		90			
Desjardins, P.Q.		19		91			
Desjardins, M., gratuity		27					
Deseronto, Ont.		31					
Devereux, John, gratuity		27					
Digby, N.S.		15		17			
" public building		7, 29					
Dipper Harbour, N.B.		17		67			
D'Israeli, P.Q.		19		91			
Doucet's Landing, P.Q.		19		200			
Douglastown, N.B.				68			
Douglastown, P.Q.		19		91			
Draper, J. M., gratuity		27					
Dredging and plant	8	25		162			
Dredging, British Columbia		25		250			
" Manitoba		25		247			
" Maritime provinces		25		159			
" New Brunswick				160			
" Nova Scotia				159			
" Ontario		25		205			
" operations	7	28		159			
" plant, names, &c.				170, 253			
" Prince Edward Island		17		161			
" Quebec		25		199			
Drumhead, N.S.		15		17			
Drummondville, P.Q., public building		8, 29	10				
Dry docks				259			
Dundas, Ont., public building		10, 31					
Dundee, P.Q., custom house		8, 30	10				
Durham, N.B.		17		68			
E							
East Templeton, P.Q.		19					
East Selkirk, Man., immigration building		12					
Eboulements, P.Q.		20		98			
Echo Bay, Ont.		22					
Edmonton, Alta., bridge		25		270			
" public buildings		12, 34	36				
" telegraphs					27, 54		
Edmundston, N.B.		18					
Eel Cove, N.S.		15		24			
Elkhorn, Man., immigration building		34					
Employees, graving docks							31
" salaries of		27					
" slides and booms							27
Engineers, firemen							33
Engineer (chief), report				1			
" (staff), salaries, &c.		27					
English River, P.Q.		19		91			
Escoumains, P.Q.				99			
Escuminac, N.B., telegraph		26			20		
Eskasoni, N.S.				18			
Esquimalt, B.C., graving dock	5	24		259		6, 14	
" " custom house		35					
Evansdale, N.B.		18		161			
Expenditure	3	28		185			

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
F							
Faber, P.Q.				92			
Fassett, P.Q.		19					
Father Point, P.Q.		19		92			
" telegraphs		26			10		
Farnham, P.Q., public building		8, 30					
Falconwood, P.E.I.		7		161			
Feltzen, N. S.		15					
Fernie, B.C., post office		13	37				
Fort Dufferin, N.B.				68			
Fort Lawrence, N.S.		15		18			
Fort William, Ont.,		22	19	141			
" public buildings		10, 32					
Fraser River, B.C.		24		156			
Fraserville, P.Q., public building		8, 30	10				
Fredericton, N.B., public buildings		8, 29	6, 7				
Freeport, N.S.		15					
Frudes Point, N.S.		15		19			
G							
Gabarus, N.S.		15		19			
Galt, Ont., public building		10, 32					
Gananoque, Ont., public building		10, 32					
Gatineau River, slides		25					
" Point, P.Q.		19		93			
Georgeville, N.S.		15		19			
Georgian Bay Canal, survey	9	27		273			
Glace Bay, N.S., public building		7					
Goderich, Ont., dredging, &c.		22		133, 205			
" public building		10, 32	19				
Godfroye River, P.Q.				200			
Golden Windermere, B.C., telegraphs		26			32, 56		
Goose Bay, N.S.		15		20			
Graham, P.Q.		19		93			
Graham's Bay, Ont.		22					
" Pond, P.E.I.		17		53			
Granby, P.Q., public building		8, 30					
Grand Bend, Ont.		22		134			
Grandes Bergeronnes, P.Q.		19		94			
Grand Decharge, P. Q.				96			
Grande Entré, P.Q.		20					
Grand Falls, N.B.		18		78			
Grand Méchins, P.Q.		19					
Grand Narrows, N.S.		15		20			
Grand Riviére, de Beaupre, P.Q.		19					
Grande Rivière de Gaspe, P.Q.		19		94			
Grand Vallée, P.Q.		19					
Gratuities paid		27					
Graving docks						6	
Graving dock officials							31
Great Salmon River, N.B.		17		69			
Green River, N.B.				79			
Green River, P.Q.				116			
Grenier, N.B.		18		78			
Grindstone, P.Q.		20	94				
Grondines, P.Q.		19	95				
Grosse Isle, P.Q.		19	10				
" quarantine		8, 30	10, 11				
" telegraphs		26			9, 20, 50		
Guelph, Ont., public buildings		10, 32	19				
Guysboro', N.S., public building		7, 29					
Gypsumville, Man.		23					
H							
Habitant River, N. S.		15					
Haileybury, Ont.		22		134			
Halifax, N.S., public buildings		7, 29	3, 4				
" graving, dock		15					
Half Island Cove, N.S.				21			
Halls Harbour, N.S.		15		21			
Hamilton, Ont.,		22		135, 206			
" public buildings		10, 32	19, 20				
Hamstead, N.B.		18		161			
Hampton, N.S.		15		22			
Harbours and rivers generally	7	15, 24		4			
Hawkesbury, Ont., public building		10, 32					
" dredging		22					
Head River, Ont.		22					
Heating public buildings		29					

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
H.							
Hiltz Narrows, N.S.		15		22			
Higgin's Shore, P.E.I.		17		54			
Hochelaga, P.Q., public building		9, 30	13				
Honora, Ont.		22		135			
Hopewell Cape, N.B.		17		69			
Hull, P.Q., wharf		19					
" public building		8, 30					
Humboldt, N.W.T., land office		12					
Hunt's Point, N.S.		15					
Hurd's Point, P.E.I.		17		54			
Hutchin's Wharf, N.B.		18					
I							
Iberville, P.Q.		19		95			
" public building		8	11				
Indian Head, N.W.T., experimental farm		13, 31					
Indian Harbour, N.S.				23			
Ingersoll, Ont., public building		10, 32	20				
Inverness, N.S., public buildings		7	5				
Iona, N.S.		15		23			
Iroquois River, N.B.		18		79			
Island of Orleans, telegraphs					9, 20, 50		
Isle aux Coudres, telegraph		26					
Isle aux Foin, P.Q.		19					
Isle aux Noix, P.Q.		19		124			
Isle d'Alma, P.Q.		20					
Isle Perrot, P.Q.		19		96			
Isle Verte, P.Q.		19		95			
J							
Janvrins Island, N.S.		15		24			
Jeddore (oyster pond), N.S.		15					
Jeannette's Creek, Ont., wharf		22		150			
Jersey Cove, N.S.		15		24			
Jersey Cove, P.Q.		19		97			
Joggins Mines, N.S.		15		24			
Joliette, P.Q., public building		8, 30	11				
Jordan Harbour, Ont.		22		135			
Judique, N.S.		15		25			
K							
Kaministiquia River, Ont.	8	22		206			
Kamloops, B.C., public buildings		13	37				
Kamloops-Nicola, telegraphs		26			28, 58		
Kamouraska, P.Q.		21		119			
Kelley's Cove, N.S.		15		25			
Kennedy Lake, B.C.		24		250			
Kenora, Ont., public building		10, 32					
Kentville, N.S., public building		7, 29	7				
Kiers Shore, P.E.I.		17		54			
Kincardine, Ont.		22		135			
Kingston, Ont., public buildings		10, 32	20, 21				
" graving dock	5	22		259		6, 16	
Kingsville, Ont.		22		136, 206			
Knowlton Landing, P.Q.				97			
Kouchpigan, P.Q.				123			
Kootenay River, B.C.				156			
L							
Labille's Point, N.S.		15					
Lac a Beaulieu, P.Q.		19		97			
Lachine, P.Q., public building		8, 30					
Lachine, P.Q., wharf		19		97			
Ladysmith, B.C., post office		13					
Ladysmith, B.C.		24		157			
La Fondrie, P.Q.		20					
La Have River, N.S.		15		11			
Lake Francis, Man.		23					
Lake Manitoba, Man.				247			
Lake Nominigue, P.Q.		20					
La Petite Peribonka, P.Q.				98, 248			
Lake Winnipeg		24		248			
Lake Winnipegosis, Man.		24		248			
Lakeport, Ont.				131			
Lake St. Francis, P.Q.		20		98			
Lake St. John, P.Q.		20		200			

Name of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
L							
Lawlers Isld, quarantine		7					
Lands leased, &c							14
Langevin bridge, Calgary		25		270			
Lamberts Pier, P.E.I		17		54			
Lambton, P.Q		20					
Lanorie, P.Q		19					
L'Anse à Islot, P.Q		19		83			
L'Anse aux Foins, P.Q		21		122			
Laprairie, P.Q		20					
Laprairie, P.Q., public building		8, 30					
La Have Islds, N.S		15		26			
L'Ardoise, N.S		15		26			
Larry's River, N.S		16		27			
L'Assomption, P.Q		20		201			
" public building		8, 30					
Last Mountain, N.W.T		24		153			
Laurier bridge, Ottawa		25					
Lavaltrie, P.Q		20					
Leamington, Ont		22		136			
Leased properties						6	14
Les Cuisses d'Alma, P.Q				98			
Les Eboulements, P.Q		20		98			
Lesser Slave River and Laàe, N.W.T		24					
Les Ecureuils, P.Q		20		99			
Les Ecoumains, P.Q				99			
Le Tableau, P.Q		20		99			
Lethbridge, N.W.T., public buildings		13, 34					
Letters, departmental, sent and received							41
Levis, P.Q., graving dock	5	20		259		6	
" public buildings	6	8	11				
Lighting public buildings		29					
L'Ile d'Alma, P.Q		20					
Lindsay, Ont., public buildings		10, 32					
Litchfield, N.S		16		27			
Little Brook, N.S		16		28			
Little Cape, P.Q		20					
Little Current, Ont		22		136, 206			
Little Forks, N.B		18					
Little Judique, N.S		16					
Little Lake Escoumains, P.Q		20					
Little River Falls, N.B		18		79			
Little Salmon River, N.B		17		70			
Liverpool, N.S		16		29			
" public building		7, 29					
Livingston's Cove, N.S		16		29			
Lloydminster, N.W.T		13, 34					
Lockport Station, N.S		15		19			
Longueuil, P.Q., public building		8, 30	12				
" wharf		20		100			
London, Ont., public buildings		10, 32	21				
Lord's Cove, N.B		18		70			
Lotbinière, P.Q		20		101			
Louiseville, P.Q				201			
Lower d'Escousse, N.S		16		38			
Lower Lincoln, N.B		18		77			
Lower St. Lawrence piers, P.Q		20					
Lunenburg, N.S., public buildings		7, 29	5				
Mc							
McGregor's Creek, Ont		22		138			
McKay's Point, N.S		15		25			
McNair's Cove, N.S		16		29			
M							
Mabou Bridge, N.S				30			
" Harbour, N.S		16		30, 159			
Macleod, Alta, public buildings		13, 34					
Madawaska River, slide		25					
Magdalen Island, P.Q		20		83			
" telegraphs		26				8, 13	
Magog, P.Q., public buildings		8					
Maguasha, P.Q		20					
Magnetawan, Ont				136			
Main-a-Dieu, N.S		16					
Magnet Channel, Ont		22		142			
Malagash, N.S		16		31			
Malbaie, P.Q		20		104			
Mallorytown, Ont		22		137			

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
M.							
Manitoba, dredging				247			
" public buildings		12, 33	33				
" harbours and rivers		23		152			
Main River, St. John, N.B.				78			
Maintou Rapids, Man.				152			
Marble Mountain, N.S.		16					
Margaree Harbour, N.S.		16		31			
" Island, N.S.		16		32			
Maritime Provinces, dredging				162			
" telegraphs					7, 12		
Marshall's Cove, N.S.		16		42			
Marsouin, P.Q.		20					
Marysville, N.B., public building		8, 29	7				
Maskinonge, P.Q.				201			
Masson, P.Q.		20		101			
Matchedash Bay, Ont.		22		206			
Meaford, Ont.		22		137, 207			
Medicine Hat, N.W.T., public buildings		13, 34	35				
Meteghan Cove, N.S.		16					
" River, N.S.		16		33			
Middle Country Harbour, N.S.		16		33			
" River Dam, N.S.		16		34			
Midland, Ont.		22		137, 207			
Mill Cove, N.S.		16					
Mill Creek, N.S.		16		33			
Millers Wharf, N.B.		18					
Mille Vaches, P.Q.		20		102			
Mitchells Bay, Ont.		23		138, 207			
Miminigash, P.E.I.		17		55			
Minnedosa, Man.		34					
Miscellaneous	10	27					
Miscou, N.B.		18		70			
Mispec, N.B.		18					
Mistook, P.Q.		20		102			
Mistasini, P.Q.				102			
Moncton, N.B., public building		8, 29	7				
Monetville, Ont.		23		138			
Montague, P.E.I., public building		7, 29					
Mont Louis, P.Q.		20					
Montmagny, P.Q., public building	6	8, 30	12				
" " wharf		20		103			
Montmorency Falls, P.Q.		20					
Montreal, P.Q., public buildings		8, 30	12, 13				
" " harbour	7	20		103			
Moosejaw, Alta., public buildings		13, 35	35				
" " telegraphs		26			27		
Moosomin, Alta., public buildings		13, 35					
Mossy River, Man.				248			
Murray Bay, P.Q.		20		104			
" Harbour, P.E.I.		17		55			
N							
Names of chief officers							23
Nanaimo, B.C., public building		13, 34	38				
Nanaimo-Comox, telegraph		26			31, 56		
Nappan, N.S., experimental farm		7, 29					
Napanee, Ont., public building		10, 32					
Narrows, Man.				152			
National Art Gallery, Ottawa		11, 32					19
Negro Point, N.B.				71			
Nelson, B.C., pubilc buildings		13, 35	38				
Neepawa, Man., public building		12					
New Brunswick, dredging		17		60, 160			
" harbours		17		60			
" public buildings		8, 29					
" telegraphs		26			19, 48		
New Campbellton, N.S.		16		34			
New Carlisle, P.Q.		20					
Newcastle, N.B., public building		8, 29					
" District, slides	4					5, 13	
" Ont.		23					
Newfoundland, telegraph		26			7		
New Glasgow, N.S., public building		7, 29	5				
New Harbour, N.S.		16		35			
New Liskeard, Ont.		23		207			
New London, P.E.I.		17		56			
Newport, P.Q.		20		104			
New Westminster, B.C., public buildings		13, 35	38				
Niagara Falls, Ont., public buildings		10 32	21				

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
N							
Nicola-Pentieton, B.C., telegraph		26			28, 58		
Nicolet, P.Q., public building		9	14				
" "				201			
" " wharf		20		201			
Nigger Island, Ont		23					
Nominingue, P.Q., immigration building		9	14				
North Bay, Ont., public building		10	21				
North Cove, P.Q		20					
North Cardigan, P.E.I		17					
North East Harbour, N.S		16		36			
North Head, N.B		18		72			
Northport, Ont		23		207			
North Pond, N.S		16		159			
North Saskatchewan River		24		154			
North Shore St. Lawrence, telegraphs		26			8, 21, 48		
North Sydney, N.S., public building		7, 29					
North Thompson River, B.C		24		157			
Northwest Branch, N.B		18					
Northwest Miramichi, N.B				73			
Northwest Territories, bridges		25		270			
" rivers		24		153			
" public buildings		33					
" telegraphs		26			9, 26, 52		
Notre Dame du Portage, P.Q		20		104			
Notre Dame de Pierreville, P.Q		20		201			
Nova Scotia, dredging		17		3, 159			
" harbours		15		3			
" public buildings		7, 29	3				
" telegraphs		26			14, 45		
O							
Oak Point, N.B		18		73, 161			
Officers of the department							23
" employed on graving docks							31
" " on slides and booms							27
Official correspodnence							41
Oka, P.Q		20		201			
Oliphant, Ont		23		139			
Ontario, bridges		25		267			
" dredging		22		205			
" harbours		22		129			
" public buildings		9, 31	17				
" telegraphs		26			9, 25, 51		
Orangeville, Ont., public buildings		10, 32	22				
Orillia, Ont., public building		10, 32	22				
" " harbour		23					
Oshawa, Ont., public building		10, 32	22				
Osoyoos, B.C, post office		13					
Otonabee River, Ont		23		139			
Ottawa, Ont., public buildings		10, 32	22				
" parliament building addition		11	27				
" art gallery		11, 32					19
" buildings and grounds		11	25, 27				
" government house		11	24				
" experimental farm		10, 32					
" Major's Hill park		10, 32					
" new departmental building	6	11					
" observatory		10, 32	22				
" post office		11, 32	23				
" printing bureau		10, 32	28				
" river, dredging		23		207			
" slides and booms	4	25		261		3	
" roads and bridges		25		267			
" streets, repairs		25					
Owen Sound, Ont		23		139, 207			
" " post office		11					
P							
Pacific cable tariff					37		
Papineauville, P.Q		20		201			
Paris, Ont., public building		32					
Parker's Cove, N.S		16		36			
Park Hill, Ont., public building		11					
Parliament buildings, Ottawa		9, 31	17				
Parr, J. A., gratuity		27					
Parrsboro', N.S		16		37			
Parry Sound, Ont		23		139			
Parry Sound Island, Ont		23					

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
P							
Partridge Island, N.B.				73			
" " quarantine		8	8				
" " wharf				73			
Paspebiac, P.Q.		20					
Peggy's Cove, N.S.		16		37			
Peel Head, P.Q.		20					
Pelee Island, Ont., telegraph		26			9, 25, 51		
Pembroke, Ont.		23		140			
" " public building		11, 33					
Penetanguishene, Ont.		23		140, 208			
Percé, P.Q.		20		105			
Pereaux, N.S.		16		37			
Peribonka, P.Q., immigration building		9, 31					
" " dredging		20		85			
Peterborough, Ont., public buildings		11, 33					
Petewawa, River, slides		25					
Petites Bergeronnes, P.Q.		20		99			
Petite Cap, P.Q.				105			
Petite Rivière, N.S.		16		38			
Petit Rocher, N.B.		18		74			
Petrolea Ont., public building		11, 34	31				
Philipsburg, P.Q.				105			
Phinney's Cove, N.S.		16					
Picton, Ont., public building		11, 33					
Pictou, N.S., harbour		16		160			
Pictou N.S., I.C.R. wharf		16		159			
Pictou, N.S., public buildings		7, 29	6				
Pierreville, P.Q.		20					
Pinette, P.E.I.		17		56			
Pleasant Bay, N.S.		16		38			
Pointe à Elie, P.Q.		20		105			
Pointe aux Esquimaux, P.Q.		20		106			
Pointe aux Trembles, P.Q.		20					
Pointe du Chene, N.B.		18		74			
Pointe Claire, P.Q.		20					
Point Edward, Ont.		23		141, 208			
Pointe aux Péres, P.Q.		19		92			
Pointe à Valois, P.Q.		20		106			
Pointe Prim, P.E.I.		17					
Pointe St. Pierre, P.Q.		20					
Poirierville, N.S.		16		38			
Pond Creek Bridge				268			
Portage du Fort, P.Q., bridge		25					
Portage la Prairie, Man., public building		12, 34	34				
Porter's Lake, N.S.		16		39			
Port Arthur, Ont, public buildings		11, 33	31				
" "	8	23		141, 208			
Port Bruce, Ont.		23		142, 208			
Port Burwell, Ont.		23		208			
Port Colborne, Ont.		23		142			
" " public building		11, 33	31				
Port Daniel, P.Q.		20					
Port Dover, Ont.		23		143			
Port Elgin, Ont.		23		143, 208			
Port George, N.S.		16		40			
Port Greville, N.S.		16					
Port Hood, N.S.		16		40, 160			
Port Hood, N.S., wharf		16		41			
Port Hope, Ont., public building		11, 33					
" "		23		144			
Port la Tour, N.S.		16		41			
Port Lorne, N.S.		16		42			
Port Maitland, Ont.		23					
Port Morien, N.S.		15		14			
Portneuf, P.Q.		21		107			
Port Selkirk, P.E.I.		17		57			
Port Stanley, Ont.		23		144, 208			
Port St. Francis, P.Q.		21					
Pownal, P.E.I.		17		161			
Prescott, Ont., public buildings		11, 33					
Prince Albert, Sask., public buildings		13, 34					
Prince Edward Island, dredging		17		51, 161			
" " harbours		17		159, 161			
" " public buildings		7, 29					
" " telegraphs		26					
Printing Bureau		31					
Printing and stationery		31					
Properties purchased and sold							

Names of Places &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
P.							
Public buildings, Alberta		12	36				
" British Columbia		13	37				
" Manitoba		12	33				
" New Brunswick		8	6				
" N.W.T.		12					
" Nova Scotia		7	3				
" Ontario		9	17				
" P.E.I.		7	9				
" Quebec		8	9				
" Saskatchewan		12	35				
" Yukon Territory		14	40				
" generally	5	14					
Public Works Agency, B.C.		27					
Pugwash, N.S.		16		42			
Purcell, P., gratuity		27					
Q							
Qu'Appelle N.W.T., telegraph		26			26		
Quebec, dredging		19		199, 201			
" bridges		25					
" harbours		19		107, 201			
" public buildings		8, 30	9				
" telegraphs		26			8, 20, 48		
" City, public buildings		9, 31	14, 15				
" " wharf		21					
R							
Rainy River, Ont.		23					
Rama, Ont.		23					
Rays Creek, N.S.		16		43			
Recapitulation		28					
Red Deer, Alta., public buildings		13, 34					
Red River, Man.		24		248			
Regina, Sask., public buildings		13, 34	36				
Rented buildings, Ottawa		33	23, 28				
			30				
Rents, received						6	
" paid		32					
Repentigny, P.Q.		21		108			
Revenue	4					3	
Richibucto, N.B., public building		8, 30					
" " wharf		18		75			
Richmond, P.Q., public building		9, 31	16				
" ice pier				114			
Rideau Hall, Ottawa		11	24				
Rigaud, P.Q.		21		202, 203			
Riley's Brook, N.B.		18					
Rimouski, P.Q., wharf		21		108			
				202			
" public building		9, 31					
Rivière-à-la-Pipe, P.Q.		21		109			
River Ashouapmouchouan, P.Q		21					
Rivière aux Renards, P.Q.		21		110			
Rivière Bas de Soie, P.Q.		21					
Rivière Batiscan, P.Q.		21					
Rivière Blanche, P.Q.		21		110			
Rivière Bourgeois, N.S.		15		43			
Rivière Chateauguay, P.Q.		19		88, 200			
Rivière des Vases, P.Q.		21					
Rivière des Quinze, P.Q.				110			
Rivière du Lièvre, P.Q.		21		111, 202			
" " slides		25					
Rivière du Loup (en bas), P.Q.		21	10	112, 202			
Rivière du Moulin, P.Q.		20					
" (en haut), P.Q.		21					
Rivière Godfroy, P.Q.		21		112			
Rivière Hébert, N.S.		16					
Rivière Jésus, P.Q.		21		113, 202			
Rivière Maskinongé, P.Q.		21					
River Miramichi, N.B.		18		73			
River Nicolet, P.Q.				113			
River Otonabee, Ont.		23					
River Ottawa, Ont.		21		207			
Rivière Ouelle, P.Q.		21		113, 203			
Rivière Richelieu, P.Q.		21		114			
" " slides		25					
Rivière Saguenay, slides		25		266		7, 13	
Rivière Saguenay, P.Q.		21					

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
R.							
River St. Francis		21		203			
Rivière St. Francois, P.Q.				114			
River St. John, N.B.		18		76, 78			
Rivière St. Louis, P.Q.		21		115			
Rivière St. Maurice, P.Q.		21		265			
" " slide		25				4, 12	
River Thames, Ont.				145			
Rivière Verte, P.Q.		21		116			
Roads and bridges		25		267			
Roberval, P.Q.		20		116			
" " immigration building		9, 31					
Robinson's Island, P.E.I.				57			
Roche's Point, Ont.		23		145			
Rockland, Ont.		23		209			
Rondeau, Ont.		23		146, 209			
Rosseau, Ont.		23					
Rossland, B.C., public buildings		13, 35					
Rosthern, N.W.T., immigration building		35					
Round Hill, N.S.		16		44			
Ruisseau Pelletier, P.Q.		20					
Rustico, P.E.I.		17		57			
Ryder, W. E., gratuity		27					
St.							
St. Alexis, P.Q.		21		118			
St. Alphonse de Bagotville, P.Q.		21					
St. André de Kamouraska, P.Q.		21		119			
St. Andrews, P.Q.		21		203			
" N.B.		18		161			
St. Andrews Rapids, Man.				153			
St. Anicet, P.Q.		21		118			
Ste. Anne de Beaupre, P.Q.				86			
Ste. Anne de Chicoutimi, P.Q.		21					
Ste. Anne des Monts, P.Q.		21		119			
Ste. Anne de Sorel, P.Q.				120			
Ste. Anne du Saguenay, P.Q.				120			
St. Boniface, Man., public building		12	34				
Ste. Blaise, P.Q.		21					
St. Catharines, Ont., public buildings		11, 33					
St. Charles Borromee, P.Q.		21		121			
St. Cœur de Marie, P.Q.		20		102			
St. Cunégonde, P.Q., post office		9, 30					
St. Edouard des Mechins				121			
St. Denis, P.Q.		21		203			
Ste. Emélie, P.Q.		21					
St. Eustache (Is. Jesus), P.Q.				113			
St. Eustache, P.Q., post office		9					
St. Felicien, P.Q.		21		122			
St. Fidele, P.Q.		21					
St. Francis River, N.B.				79			
" P.Q.				114			
St. Francois de Sales, P.Q.		21					
St. Francois, I. O., P.Q.		21		122			
St. Fulgence, P.Q.		21		122			
St. Gédéon, P.Q.				123			
St. Gédéon Island, P.Q.				123			
St. Henri, P.Q., public building		9, 31					
St. Hilaire, P.Q.				203			
St. Henri de Taillon, P.Q.		21		109			
St. Hyacinthe, P.Q., public buildings		9, 31	16				
St. Ignace de Loyala, P.Q.		21					
St. Irénée, P.Q.		21		123			
St. Jean Chrysostôme, P.Q.		19		91			
St. Jean des Chaillons, P.Q.		21		123			
St. Jean, Ile d'Orléans, P.Q.		21					
St. Jérôme, P.Q., public building		9, 31	16				
St. John River, N.B.		18		76			
" harbour, N.B.	8	18		79, 161			
" N.B., public buildings		8, 30	7, 8				
St. Johns, P.Q., ice piers				114			
" public buildings		9, 31	16				
St. Joseph, Ont.		23		149			
St. Laurent, Isle d'Orléans, P.Q.		21		124			
St. Louis du Mile End, P.Q., public building		9, 30					
St. Louis River headgate, P.Q.				115			
St. Marys, Ont., public buildings		11	32				
" River, Ont.		23					
St. Maurice River, dredging				204			
" slides	4			265		4, 12	

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
St.							
St. Méthode, P.Q.				127			
St. Paul de L'Ile aux Noix				124			
St. Ours, P.Q.				204			
St. Peter's Bay, P.E.I.		17		58			
St. Placide, P.Q.		21		204			
St. Prime, P.Q.		21					
St. Roch, P.Q., public building		31					
St. Siméon, P.Q.		21		124			
St. Stephen, N.B., public building		8, 30	8				
St. Sulpice, P.Q.		21					
St. Thomas, Ont., public building		11, 33	31				
St. Timothee, P.Q.		22		124			
St. Ulric de Matane, P.Q.		21		110			
St. Valentine, P.Q.				124			
St. Valier, P.Q.		22		125			
St. Zotique, P.Q.		22		125			
S.							
Sabrevois, P.Q.		21		117			
Sacré Couer de Marie, P.Q.		20		102			
Saguenay River, slides		25				5, 13	
" telegraph		26					
Salaries of Enginemen, &c		27					33
Sandwich, Ont., public building		11, 33	32				
Sand Point (St. John), N.B.	8			79			
Sarnia, Ont., public building		11, 33	31				
" dredging		23		147, 209			
Saskatoon, Sask., public building		13, 35					
Saskatchewan River, N.W.T.		24					
Saskatchewan Province		12, 34	35				
" " telegraphs		26					
Saugeen River, Ont.		23		147			
Sault au Mouton, P.Q.		21		126			
Sault Montmorency, P.Q.				126			
Sault Ste. Marie, Ont., wharf		23		147			
Sault Ste. Marie, Ont., public building		11-33					
Scotch Cove, N.S.		16		44			
Scott's Bay, N.S.		16		44			
Secretary, staff, salaries		27					
Selkirk, Man., public buildings		12					
" wharf		24		152			
Seven Islands, P.Q.		19					
Severn River, Ont.		23		148			
Shediac, N.B.		18		74			
Sheet Harbour, N.S.		16		49			
Shelburne, N.S., public building		7					
Shellmouth bridge, N.W.T.		25		269			
Sherbrooke, P.Q., public buildings		9, 31					
Sheguindah, Ont.		23		148			
Shippegan Gully, N.B.		18		80			
Sidney Island, B.C.		24		157			
Silverwater, Ont.		23		148			
Simcoe, Ont., post office		11					
Sissons Falls, N.B.		18		78			
Skeena River, B.C.		24		158			
Skinner's Cove, N.S.		16		45			
Slides and booms	4	25		261			
" dues						3, 15	
" officials							27
Smith Falls, Ont., public building		11, 33					
Smithville, N.S.		16					
Sorel, P.Q., harbour		22		126			
" dredging		22		204			
" public buildings		9, 31	16				
South River, P.E.I.		17		55			
South Thompson River, B.C.		24		157			
Souris, P.E.I.		17					
" post office		7, 29	9				
Southampton, Ont.		23		149			
South Nation River, Ont.		23		209			
Springhill, N.S., public building		7, 29					
Stephens Pier, P.E.I.		17		58			
Stettler, N.W.T.		35					
Stonehaven, N.B.		17		81			
Stratford, Ont., public buildings		11, 33	32				
Strathcona, Alta., immigration building		35					
Strathroy, Ont., public building		11, 33	32				
Sturgeon Falls, Ont.		23		209			

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
S							
Summerside, P.E.I., harbour		17		59			
" public buildings		7, 29					
Superintendent of telegraphs					1		
Surveys and inspections		27					
Sussex, N.B., public building		8, 30					
Sydenham River, Ont		23					
Sydney, N.S., public building		7, 29					
" quarantine		7, 16	6	46			
" dredging		16		159, 160			
Sydney Mines, N.S., public building		7, 28					
T							
Tableau, P.Q		20		99			
Tadousac, P.Q		22					
Tariff, telegraph lines					37		
Tatamagouche, N.S		16		46			
Technical books of reference		27					
Telephones					11		
Telegraph lines, generally	10	26			9		
" report					1		
" revenue					10		
Telegraph service, staff		27			11		
Terrebonne, P.Q., public building		9, 31					
" wharf		22					
Thames River, Ont		22		150, 209			
Thessalon, Ont				149			
Thetford Mines, P.Q., public building		9	17				
Three Rivers, P.Q., harbour	7	22		127			
" public buildings		9, 31	17				
Thurso, P.Q		22		204			
Tignish, P.E.I		17					
Ticouabe, P.Q				127			
Tobique River, N.B		18		78			
Toney River, N.S		16		46			
Tooleton, N.B		18					
Toronto Junction, Ont., public building		12, 33	33				
" Ont., harbour		23		149, 210			
" " public buildings		11, 33	32, 33				
Total expenditure of department	4	27					
Tracadie, N.B., lazaretto		8, 30	8				
" N.S., harbour		16		47			
Transportation Commission		27					
Treadwell, Ont		23		150			
Trent and Newcastle slides						5, 13	
Trenton, Ont., harbour		23		210			
" public building		12, 33					
Trois Pistoles, P.Q		22		127			
Trowsers Lake, N.B		18					
Truro, N.S., public buildings		7, 29	6				
Tynemouth Creek, N.B		18		82			
Tyrian, SS., cable ship					9, 72		
U							
Uncollected slide and boom dues						15	
Upper Granville, N.S		16		43			
Upper Sheffield, N.B		18					
V							
Valois, P.Q		20		106			
Valleyfield, P.Q., public building		9, 31					
Vancouver, B.C., public buildings		13, 35	38				
Vancouver-Salt Springs, telegraph		26			33, 56		
Verdun, P.Q		22		128			
Virden, Man		33					
Victoria, B.C., harbour		24		251			
" public buildings		13, 35	39				
Victoria-Cape Beale, telegraph		26			30, 55		
Victoria Wharf, N.B		18		161			
Victoria Beach, N.S		16					
Victoria Pier, P.E.I		17		60, 161			
Victoria National Museum			29				
Victoriaville, P.Q., public building		9, 31	17				
Ville Marie, P.Q		22		128, 204			

Names of Places, &c.	Part 1 Page.	Part 2 Page.	Part 3 Page.	Part 4 Page.	Part 5 Page.	Part 6 Page.	Part 7 Page.
W							
Walkerton, Ont., public building		12, 33	33				
Wallace, N.S.		16		47			
Waupoos East, Ont.		23		210			
Washago, Ont.		23		148			
Water, public buildings		29					
Waubaushene, Ont.				151			
Wendover, Ont.		23		151			
West Arichat Wharf				47			
West Arichat, N.S.		16		47			
West Farnham, P.Q., public building		30					
Western Head, N.S.		16		47			
West Quoddy, N.S.		17		49			
West River, N.S.		16		49			
West Head, N.S.		16					
West Selkirk, Man.		24		248			
Westville, N.S., public building		7					
Weymouth, N.S.		16		49			
White Cove, N.B.		16					
Whitehorse, Y.T., post office		35					
Whitemouth, N.W.T., bridge		25		268			
Wiarton, Ont.		23		151			
Williams Head, B.C., quarantine		13, 35	39	158			
Williams Head, B.C.		24					
Wilson's Beach, N.B.		18		82			
Windsor, N.S., public building		7, 29					
" " dredging		17		160			
Windsor, Ont., public building		12, 33					
Wingham, Ont., post office		12, 33					
Winnipeg, Man., public buildings		12, 34	34, 35				
Winnipeg River, Man.		24		152			
Winnipegosis, Man.		24		248			
Woodstock, Ont., public buildings		12, 33					
Woodstock, N.B., public buildings		8, 30					
Wood Island, P.E.I.		17	60				
Wood Mountain, N.W.T., telegraph		26			27, 54		
Wolfe Island, Ont.		23					
Wolfville, N.S.		17		49			
Wolseley, Alta., court house		13, 35					
Wreck Cove, N.S.			50				
Y							
Yamaska River, P.Q.		22		204			
Yamaska, P.Q., lock and dam		22		260			
Yarmouth, N.S., dredging		17		160			
" " public building		7, 29					
Yorkton, Alta., public buildings		35					
Yukon, public buildings		14, 35	40				
" telegraphs		26			34, 60		

PART I

REPORT

OF THE

DEPUTY MINISTER OF PUBLIC WORKS

FOR THE YEAR ENDED MARCH 31

1907

REPORT

OF THE

DEPUTY MINISTER OF PUBLIC WORKS

FOR THE

FISCAL PERIOD ENDED MARCH 31, 1907

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, November 15, 1907.

HON. WILLIAM PUGSLEY,
Minister of Public Works of Canada,
Ottawa.

SIR,—I have the honour to submit the report of the operations of the Department of Public Works during the fiscal year ended March 31st last.

On account of the change in the date of termination of the year, the report covers nine months only, from July 1, 1906, to March 31, 1907. In making the usual comparison between the expenditure of the present and the previous fiscal year, you will kindly bear in mind the difference in the period under review.

EXPENDITURE.

The total expenditure incurred by the department during the year 1906-7 amounts to the sum of $7,155,396, and is classified under the following different heads:—

Harbours and rivers	$1,532,255 77
Dredging	1,964,529 28
Slides and booms	98,636 08
Roads and bridges	44,461 55
Public buildings	2,784,713 69
Telegraphs	376,605 48
Miscellaneous	354,194 21
	$7,155,396 06

The above statement shows a continuation of the expansion of the work of the department during the year under review, the expenditure being in proportion somewhat greater than that of the preceding year.

REVENUE.

The total revenue for the year amounts to the sum of $279,484.15, subdivided as follows:—

Slides and booms	$86,837 98
Graving docks	30,652 79
Rents	6,566 70
Telegraph lines	91,760 84
Casual revenue	63,665 84
Total	$279,484 15

If a proportion be established between the full twelve months of the year 1906, when the revenue amounted to $261,314.67, divided as follows:

Slides and booms	$81,211 21
Graving docks	44,067 63
Rents	4,343 00
Telegraph lines	106,300 38
Casual revenue	25,392 45
Total	$261,314 67,

it will be seen that the short fiscal year under review presents quite an improvement on the preceding one; every item of revenue being proportionately greater, and that for slides and booms, without even the deduction of the proportionate three months, being greater than in 1906-7. The only shortage apparent is in the operations of the graving docks, and this is more a subject of congratulation than of complaint, as a decreased revenue in the operations of the docks means fewer casualties to vessels, therefore smaller loss to the shipping trade and commerce of the country.

The revenue received from slides and booms is subdivided as follows:—

St. Maurice district	$41,324 16
Ottawa district	43,843 61
Newcastle district	1,670 21
Total	$86,837 98

This subdivision shows a steady improvement in the revenue derived from the St. Maurice works which, for the past six years, is as follows:—

1902	$13,565 48
1903	29,232 33
1904	27,321 67
1905	36,431 21
1906	37,101 02
1907	41,324 16

It is encouraging to note the progress in some of our revenue-producing works, the more so as while the sums expended in improvements on the River St. Maurice were quite large during the past few years, hopes were always held out that any expenditure for the maintenance and renewal of the existing works would be followed by an almost certain increase in the revenue. It is pleasing to see that our expectations are being fulfilled. The revenue for the current year is expected to be even greater than that of the past year, as all the industries on the River St. Maurice are taking every advantage of better conditions and enlarging their output accordingly.

The amounts received from the operations of the graving docks are as follows:—

Esquimalt	$19,627 04
Kingston	4,365 93
Lévis	6,659 82

The receipts from the Esquimalt dock are greater than they were last year, but those for Kingston and Lévis are much below that of the preceding year.

PUBLIC BUILDINGS.

The progress in this branch of the department has been most marked during the fiscal period under review, and its work is better exemplified by the number of buildings which were commenced, completed and occupied during the fiscal year.

The following is a list of the buildings completed:—Public buildings for post office, customs, &c., purposes at Antigonish, Canso, N.S.; Souris, P.E.I.; Longueuil Que.; Alexandria, Sandwich, Ont.; drill hall at Fredericton, N.B.; St. Hyacinthe, Que.; Chatham, Ont.; custom-house at Halifax; military stores at London, Ont.; armouries at Stratford, Ont.; immigration buildings at Winnipeg and Edmonton; a building at New Westminster, B.C., for the Indian and Fisheries Departments; large buildings in Ottawa for the Archives, the Royal Mint, and a new addition to the West block of the departmental buildings.

The buildings now under construction are the following:—Post offices, &c., at Chicoutimi, Lévis, Montmagny, Que.; a post office at St. John's, Que.; post office, &c., buildings at Medicine Hat and Regina, Sask.; an addition to the post office at Calgary, Alta.; an extensive post office building at Vancouver, B.C.; a drill hall at Three Rivers, Que., and an extension to the drill hall at Toronto; armouries at Guelph, Ont.; a new post office building at Winnipeg, Man.; an addition to the post office at Calgary, Alta.; a postal station 'F' at Toronto, and an immigration hospital at Quebec. Three extensive buildings are also under way in the city of Ottawa, viz., an addition to the Parliament buildings; an extension to the Supreme Court building, and the Victoria Memorial Museum for geological, &c., purposes, located at the foot of Metcalfe street in this city.

During the year the following buildings were placed under contract:—Post office, &c., buildings at Inverness, N.S.; Iberville, P.Q.; North Bay, Ont.; St. Boniface, Man.; Edmonton, Alta., and Fernie, B.C., as well as a new drill hall at Hamilton, Ont.

The public buildings reported as being under construction at Lévis and Montmagny are almost completed, while that at Chicoutimi is now being supplied with its heating apparatus, fittings, &c., preparatory to an early occupation. The immigration hospital at Quebec and the drill hall at Three Rivers are being supplied with fittings. The Victoria Memorial Museum in Ottawa is being pushed with vigour, and it is expected that it will be finished within the time specified in the contract.

The expenditure on the public buildings of the Dominion is under the control of the chief architect of the department, and covers not only the construction of new works but the repairs and maintenance of the existing ones, as well as their supply during the year with all the fittings, lighting, heating, water, &c.

The number of buildings under the control of the department is increasing rapidly, and the sums required for their maintenance are steadily growing larger. These buildings deteriorate every year, even with the best of care, and require to be constantly attended to in order to retain an appearance worthy of the country which constructs and maintains them.

The various works connected with the above have been carried on with attention by the large staff under the control of the chief architect, who has reason to congratulate himself on the fine appearance of the buildings being erected over the length and breadth of the Dominion, as well as of those which have been constructed for some time and maintained under the supervision of his staff.

The cost of the buildings now being put up is materially in excess of that of similar ones erected a few years ago. The increase in the value of materials as well as in the rate of wages paid to the various workmen engaged in their construction; the reduction of the working hours, &c., all tend to increase the cost of construction. When a comparison, therefore, is being made between the present buildings and similar constructions made fifteen or twenty years ago, a very considerable percentage has to be added to the old buildings in order to make the comparison a fair one with the present cost. The same may be said of the amounts paid for maintenance, &c., the price of everything having gone up, the supplies necessary, the wages of the men engaged, the salaries of the permanent staff, have all been increased.

During the fiscal year under review steps have been taken to obtain competitive drawings for the construction of the proposed new departmental buildings in the city of Ottawa. The plans were received by the department, and examined by a professional committee composed of Messrs. E. Burke and A. Chaussé, architects of Toronto and Montreal, and Mr. David Ewart, I.S.O., chief architect of the Department of Public Works. Twenty-nine designs were received, aggregating 397 large sheets with 186 sheets of descriptive memoranda. A careful and protracted examination by the assessors resulted in the following award:—

1st prize—E. S. Maxwell, $8,000.
2nd prize—Darling & Pearson, $4,000.
3rd prize—Saxe & Archibald, $2,000.
4th prize—Brown & Vallance, $1,000.

It has not yet been decided whether the plans submitted will be followed in their entirety or whether the designs will only serve as a model in the preparation of the final working plans. The designs which gained the prizes have become the absolute property of the department.

HARBOURS AND RIVERS.

The amount expended in that most important branch of our service totals up to $3,639,882.68; the said sum having been expended under the direction of the chief engineer and his valuable staff of assistants throughout the Dominion during the short fiscal year under review, the sum expended in 1906-7 for the same service having amounted to $4,552,334.80. Works of improvement, other than dredging, have been carried on at 376 different points in the Dominion of Canada from the Atlantic to the Pacific coasts during the year under review, those works mainly consisting of the construction of wharfs, piers, &c., their repair, improvement and reconstruction.

During the year, an important work under the control of the Department of Public Works was completed, viz., the high level pier in the lower division in the harbour of Montreal at Maisonneuve, the work having been executed in a very satisfactory manner by the firm of W. J. Poupore & Co., Limited. Another work which was also handed over in the dock constructed in the harbour of Three Rivers by Mr. Randolph Macdonald; this work has been placed under the management of the harbour commissioners of Three Rivers, and it is understood that the space which it affords has been immediately occupied by various companies trading with that port. The work was handed over to the department in very good condition, and reflects great credit on the contractor and engineers, who have designed and superintended it. The pier constructed by the Poupore Company is one of the best of the kind on this continent, and is admired by every one who has occasion to visit the same and who is acquainted with the difficulties which accompanied its execution.

The report of the chief engineer gives details of the works constructed or maintained in every province. Statements are given of the cost of each work, a description is supplied of their location, extent, depth of water, &c., and the report contains valuable information concerning every one of the works reviewed.

In the front ranks of the operations of the department may be placed the work of dredging. Owing to peculiar circumstances, created by the increase in the size of vessels carrying on the shipping trade on Canadian waters, and at some points, to the decrease in the depth of water, due to deforestation, &c., dredging has had to be performed in numerous places, the work being, in the majority of cases done by contract after a call for public tenders.

As a fact, contracts were only made without public tenders for work at places when, on the public call, no tenders were received presumably because the parties having dredging fleets saw before them sufficient work to be performed during the season in other places and therefore did not cover the whole field before them when the call for tenders was made.

The lack of dredging machinery is not only felt in the department but also among the dredging contractors; often enough also, when the contractors have the appliances, those are of a kind which are not well able to perform the work which they are called upon to do. Furthermore, dredging has some times to be done in exposed places, where the dredges cannot stand the buffeting of the storms or can perform very little work during the time they are engaged.

Be it as it may, however, the work of the department in that direction has been quite extensive, and productive of very good results.

In the maritime provinces, operations have been carried on at twenty-three different points by the dredges of the department, while work has been performed in the harbour of St. John, N.B., by a dredge, the property of Mr. G. S. Mayes, the work having been awarded after a call for public tenders. This work is now being continued by Mr. Mayes' dredge and by another owned by the Dominion Dredging Company. It is intended to add the dredge *W. S. Fielding* to the two other dredges in order to improve the entrance to the harbour and to provide necessary berths for the steamships which are engaged in carrying on the winter trade between Canada and the European ports.

In the province of Quebec dredging was performed at thirty-eight points, while in the province of Ontario thirty-four places were improved.

A large contract was given during last year for dredging in the Kaministiquia and Mission rivers and in the harbour of Port Arthur, these contracts being intended to extend over several years and to provide sufficient water for the navigation which will require to use these channels when the work will be completed.

Improvements of the same nature were also made by the plant owned by this department in Manitoba and British Columbia.

As I have above stated, however, the bulk of the fleet of privately owned dredges is found in the provinces of Ontario and Quebec. In the province of New Brunswick there is only one point where a private dredge was at work. In Nova Scotia, Prince Edward Island, Manitoba and British Columbia all the work of that nature is being performed by dredges owned by the department. The Department of Public Works owns altogether 31 dredges, distributed as follows, viz.:—

Maritime provinces	10
Ontario and Quebec	15
Manitoba	3
British Columbia	3

with the attending scows of various kinds. Some difficulty is experienced for the towing of the dredges from one place to the other, especially for conducting the new dredging appliances from the points where they are constructed to those where they are to be placed at work. For that purpose, a large sea-going tug is required, and its expenses will soon be covered when it is considered that last year the sum of nearly $30,000 was expended in towage outside of that which was done by the vessels owned by the department.

The various appendices attached to the report of the chief engineer show in detail the work done by the dredging fleet, both department owned and private owned, the quantity of material removed at different points, the nature of such material and the cost of the operations.

The staff of the chief engineer, distributed throughout the Dominion, has, in the several districts assigned to it, not only to supervise the work of construction of docks, piers and breakwaters, but also to indicate the nature of the work required to be done by the dredges, as well as to make a large number of surveys and examinations required each year for the preparation of the estimates laid before parliament. The work done by those officers cannot be too highly praised, as well as their devotion to the department, in working early and late and in all kinds of seasons and weather.

GEORGIAN BAY SHIP CANAL.

Annexed to the report of the chief engineer is an interim report of the Georgian Bay Ship Canal survey by the engineer in charge, Mr. Arthur St. Laurent. The report in question is only a short one, inasmuch as in a few months a complete report, with plans and estimates, will be supplied to the department, and it is therefore unnecessary at the present moment to go into minute details. I quote from Mr. St. Laurent's report the following remarks:—

'The proposed work is one of great magnitude, and presents many engineering difficulties which require long and serious consideration. These difficulties can be overcome, but in deciding on the general lines of the project and the character of the structures and methods of construction due consideration must be given to economy in design, and great care exercised in not interfering too much with established industries or vested interests. At the same time, it is of the greatest importance that the canal be designed to meet the object in view, and assure safe passage to large boats.'

'It may be well here to state that the amount of engineering work involved is so large that the officers in charge of the survey have had to devote their whole time to the consideration of the technical part of the project only, and it will be possible for them to treat only lightly, in their report, on the commercial possibilities of the waterway.'

The report also contains valuable suggestions on several points outside of the purely technical part of the work, which would require to be considered and studied, and this may probably be the field within which a commission, if appointed in connection with this work, may find very useful employment and labour.

The time does not appear to have come as yet, however, for the discussion as to whether the work in question should be carried on under the control of a commission or whether it should be directly executed by the department, as was the construction and extension of the several other Canadian canals. Whether this mode or another be selected for the supervision of construction, it may be stated that the service performed by the officers of the survey, for the past three years, has been most careful and accurate, and that whatever authority may be in charge of the work, will

have in the engineer now at the head of the survey, and in those who have assisted him, as well as in their plans, notes, estimates, reports, &c., a sure guide in the planning and execution of the work.

TELEGRAPHS.

The department at present controls over 7,000 miles of telegraphs, both in land lines and cables. Few land lines have been constructed during the year under review. Some stretches of wire have been laid in the Chicoutimi district and in some parts of the provinces of Saskatchewan and Alberta, but the main work done during the year has been the keeping in repair of the several lines and their management in order to serve the public, for the benefit of whom they have been constructed, in many cases, at points remote from the centre of business, and where private companies did not think the remuneration would be in direct ratio to the amount required for construction and operation. The cables have been kept in good condition by the officers and crew of our cable ship *Tyrian,* who have performed their work in a very satisfactory manner.

The duty of collecting the returns from those several telegraph lines is in some cases very arduous, and it is also quite difficult to obtain the returns at the time when they may be needed for the preparation of the auditor general's statement. Many of those lines are located in out-of-the-way places, where the amounts paid in are very small. On some stretches, especially on the coast of the lower St. Lawrence, where the lines are more for the purpose of signalling, &c., the operators receiving only very small pay, the returns are also very small, and it is pretty hard to make them consider the making of those returns as important a matter as if their salary were greater and amounts involved larger. During the year, some difficulty has been experienced on that score, but matters are steadily improving, and it is hoped that during the next year the improvement will be even more noticeable, until a standard will be obtained which will be quite satisfactory to all concerned.

MISCELLANEOUS.

The report further contains the usual data concerning the contracts awarded by the department, the property purchased, sold and leased, as well as the correspondence carried on between the several officials and the public. The report of the Collector of Revenue is also a feature of the appendices herewith submitted.

All those statements show the vast expansion which is gradually taking place in our work, and shows also the great care which has been taken by each officer in the performance of his special duties.

In conclusion, I beg, in submitting this my seventeenth report as Deputy Minister of your department, to express my deep appreciation of the assistance given me by the officers and clerks in our service, and should my tenure of office not continue for a much longer period I will always carry with me the most pleasant remembrance

of the help which they have given me in the performance of our work. The department has been increasing by leaps and bounds. In 1880, the number of clerks employed therein was about 17, and the appropriations at our disposal did not much exceed $500,000; last year the appropriations granted by parliament totalled over $14,000,000, and the staff of employees has increased in some proportion, although I may say that the increase in staff has not kept pace with the expansion of the expenditure.

I have the honour to be, sir,
Your obedient servant,

A. GOBEIL,
Deputy Minister.

PART II

REPORT OF THE CHIEF ACCOUNTANT

FOR THE

FISCAL PERIOD ENDED MARCH 31

1907

DEPARTMENT OF PUBLIC WORKS, CANADA,
ACCOUNTANT'S OFFICE,
OTTAWA, October 26, 1907.

A. GOBEIL, Esq., I.S.O.,
Deputy Minister,
Department of Public Works,
Ottawa.

SIR,—I beg to submit the report upon the expenditures made by this Department during the fiscal period of nine months ended March 31, 1907.

As in previous years the report takes the form of three tabular statements, as follows :—

Statement A, showing the expenditure upon each work under the several heads of (1) construction and improvements, (2) repairs, (3) staff and maintenance. In treating of public buildings, as it is found desirable to give the cost of maintenance in greater detail, this information is shown in a second statement, as described below, the total cost of maintenance for each province being condensed to one item in statement A. In treating of harbours and rivers an additional column is devoted to the cost of dredging.

Statement B, showing separately for each building the cost of rent, salaries, heating, lighting and water.

Statement C, showing amounts advanced by Government for the construction of certain works of a semi-public character, under statutory authority and after inspection by officers of this department.

The total expenditure during the fiscal period was $7,155,396.06. For purposes of comparison with the expenditure made during the previous full fiscal year it will be necessary to reduce the figures of that year by one-fourth. From this it will be seen that there has been but a slight increase in expenditure (about 2 per cent) as follows :—

Total expenditure, 1905-6.....	$ 9,347,527 22	
Three-fourths of same.....		$ 7,010,645 42
Total expenditure, 1906-7.....		7,155,396 06
Increase.....		$ 144,750 64

The volume of work passed through the Accountant's Branch during 1906-7 may be briefly indicated as follows:—

—	Number of cheques issued.	Amount.
		$ cts.
Direct payment by departmental cheque—		
Issued by head office, Ottawa	37,294	3,152,913 23
" agencies	5,767	399,490 81
Total departmental cheques	43,061	3,552,404 04
Payment by Receiver General's cheque, after applications issued by this office, upon the Auditor General (contract work, &c.)	740	3,602,992 02
Total expenditure		7,155,396 06

I have the honour to be, sir,
Your obedient servant,

A. G. KINGSTON,
Chief Accountant.

STATEMENTS OF EXPENDITURE

DURING

FISCAL PERIOD ENDED MARCH 31, 1907

STATEMENT A.—Showing the Amounts Expended by the Department of Public Works of Canada during the fiscal period ending March 31, 1907.

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS.	$ cts.	$ cts.	$ cts.	$ cts.
Nova Scotia.				
Amherst post office		55 85		55 85
Annapolis "		295 09		295 09
Antigonish "	2,548 46	7 96		2,556 52
Arichat "		9 50		9 50
Baddeck "		19 33		19 33
Bridgewater public building	5,591 21			5,591 21
Canso post office	7,525 02			7,525 02
Dartmouth post office		2 20		2 20
Digby "		13 30		13 30
Glace Bay "	5,330 26			5,330 26
Guysboro' "		75 53		75 53
Halifax appraiser's office (E.W.)		5 50		5 50
" cattle quarantine station	887 30			887 30
" custom house (new)	39,397 84	24 20		39,422 04
" immigrant building	2,039 69	1,756 63		3,796 32
" detention building	30,013 88			30,013 88
" Lawlor's Island quarantine station (winter hospital)	6,196 28			6,196 28
" post office (formerly Dominion Building)	1,743 54	114 50		1,858 04
Inverness post office	8,734 48			8,734 48
Kentville "		266 43		266 43
Liverpool "		211 42		211 42
Lunenburg "	2,038 45	3 00		2,041 45
Nappan experimental farm		385 72		385 72
New Glasgow post office		432 29		432 29
North Sydney "	2,745 72	28 99		2,774 71
Pictou custom house		383 34		383 34
" post office	1,129 40	226 35		1,355 75
Shelburne public building	1,594 55			1,594 55
Springhill post office		378 36		378 36
Sydney "	4,429 08	91 36		4,520 44
" quarantine station artesian well	207 29			207 29
Sydney Mines post office		1,539 34		1,539 34
Truro post office		553 25		553 25
Westville public building	2,000 00			2,000 00
Windsor post office		514 23		514 23
Yarmouth "	465 64	31 75		497 39
Heating, lighting, water, &c., for all buildings in Nova Scotia (for details see page 29)			26,675 54	26,675 54
Totals, N.S.	124,618 19	7,425 42	26,675 54	158,719 15
Prince Edward Island.				
Charlottetown Dominion Building		1,107 84		1,107 84
Montague post office		26 13		26 13
Souris "	5,810 43			5,810 43
Summerside "	1,500 00	400 80		1,900 80
Heating, lighting, water, &c., for all buildings in Prince Edward Island (for details see page 29)			5,618 82	5,618 82
Totals, P.E.I.	7,310 43	1,534 77	5,618 82	14,464 02

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
New Brunswick.				
Bathurst post office		246 56		246 56
Campbellton post office	3,818 62	34 40		3,853 02
Chatham "		276 80		276 80
" Engineer's office		41 19		41 19
Dalhousie post office		1,602 82		1,602 82
Fredericton "		2,872 42		2,872 42
" drill hall	2,205 00			2,205 00
Marysville post office		140 00		140 00
Moncton "		374 27		374 27
Newcastle "		5 00		5 00
Partridge Island quarantine station—waterworks	12,999 42			12,999 42
" " " buildings, &c.	1,637 00	1,190 50		2,827 50
Richibucto post office		366 56		366 56
St. John cattle quarantine station	4,765 35			4,765 35
" custom house		1,741 72		1,741 72
" immigration building		236 95		236 95
" military building	6 00			6 00
" post office		410 17		410 17
" savings bank		20 24		20 24
St. Stephen's post office		15 00		15 00
Sussex "		128 27		128 27
Tracadie lazaretto	152 08	79 00		231 08
Woodstock armoury	9,875 30			9,875 30
" post office		620 02		620 02
Heating, lighting, water, &c., for all buildings in New Brunswick (for details see page 30)			26,229 73	26,229 73
Totals New Brunswick	35,458 77	10,401 89	26,229 73	72,090 39
Quebec.				
Actonvale post office	1,061 59	12 52		1,074 11
Aylmer "	1,016 97	183 41		1,200 38
Beauport inland revenue office		60 00		60 00
Berthierville post office		344 81		344 81
Buckingham "		136 82		136 82
Chicoutimi "	9,893 58			9,893 58
Coaticook "		247 68		247 68
Drummondville "		621 37		621 37
Dundee custom house		158 55		158 55
Granby post office		4 81		4 81
Grosse Isle quarantine station	12,520 27			12,520 27
" disinfecting apparatus, including building	223 82			223 82
Farnham post office		46 05		46 05
Fraserville "	952 55	489 45		1,442 00
Hull "		19 85		19 85
Iberville "	6,059 67			6,059 67
Joliette post office	685 29	252 06		937 35
Lachine "		221 84		221 84
Laprairie "		27 66		27 66
L'Assomption post office		37 38		37 38
Levis, cattle quarantine station		581 95		581 95
" post office	7,060 83			7,060 83
Longueuil post office	220 53	2 63		223 16
Magog "	4,150 00			4,150 00
Montmagny "	1,380 77	4 93		1,385 70
Montreal custom house		2,615 86		2,615 86
" engineer's office		1,841 20		1,841 20
" examining warehouse	7,000 00	269 12		7,269 12
" " power for elevators			211 09	211 09
" immigration office		200 19		200 19

SESSIONAL PAPER No. 19

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
Quebec—Continued.				
Montreal inland revenue office		1,381 08		1,381 08
" post office (main)		7,462 98		7,462 98
" " power for elevators			1,765 88	1,765 88
" " rented branch offices		370 80		370 80
" pneumatic tube system between G.P.O. and new postal stations	1,571 00			1,571 00
" new postal station (B), St. Catherine St	27,606 03			27,606 03
Nicolet post office	8,152 51			8,152 51
Nominingue immigration building	2,212 90			2,212 90
Peribonka immigrant shed	200 00	11 91		211 91
Quebec citadel, Governor General's quarters		810 95		810 95
" clerk of works office, (P.O.)		13 00		13 00
" custom house		2,291 43		2,291 43
" examining warehouse		789 63		789 63
" King's wharf building, (marine signal service, culers, gas inspector, weights and measures)		54 88		54 88
" immigration building, (Louise Embankment)		1,258 10		1,258 10
" immigration hospital for trachoma	30,092 99			30,092 99
" post office		3,325 26		3,325 26
" " power for elevator			100 00	100 00
" military buildings	478 13			478 13
" " shed for storage of heavy goods in shot yard	535 00			535 00
" resident engineer's office		196 50		196 50
Richmond post office		87 67		87 67
Rimouski post office	419 21	26 65		445 86
Roberval immigrant shed		62 38		62 38
Sherbrooke post office		399 40		399 40
Sorel post office, &c	1,340 10	333 29		1,673 39
St. Cunegonde post office	3,160 00	7 45		3,167 45
St. Eustache "		7 45		7 45
St. Henri "		46 12		46 12
St. Hyacinthe "	16,582 21			16,582 21
" inland revenue office		99 57		99 57
" post office, &c		173 33		173 33
St. Jerome "		320 97		320 97
St. John's "	829 60			829 60
" military buildings, stables for cavalry	32 25			32 25
St. Louis du Mile-End post office		406 71		406 71
Terrebonne post office		109 46		109 46
Thetford Mines post office		481 31		481 31
Three Rivers custom house	2,027 59	1,114 10		3,141 69
" " paid city for drainage, snow clearing, &c., 1896-1905			420 96	420 96
Three Rivers drill hall	24,618 51			24,618 51
" post office		298 16		298 16
" " paid city for drainage, snow clearing, &c., 1896-1905			555 58	555 58
Valleyfield post office		43 30		43 30
Victoriaville "		318 57		318 57
Heating, lighting, water, &c., for all buildings in Quebec (for details see page 31)			92,552 82	92,552 82
Totals, Quebec	172,083 90	30,682 55	95,606 33	298,372 88
Ontario.				
Alexandria post office	8,907 38	48 26		8,955 64
Almonte "		156 75		156 75
Amherstburg "	850 55	43 71		894 26
Arnprior post office	166 80	52 25		219 05
Barrie "		935 62		935 62

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*				
Ontario—Continued.	$ cts.	$ cts.	$ cts.	$ cts.
Belleville armoury	1,985 69			1,985 69
" post office	2,800 56	191 86		2,992 42
Berlin "		219 71		219 71
Bowmanville "		8 97		8 97
Brampton "		968 65		968 65
Brantford drill hall	1,629 06			1,629 06
" post office	2,917 57	42 85		2,960 42
Bridgeburg "		935 60		935 60
Brockville "	60 00	1,477 61		1,537 61
" drill hall		47 43		47 43
Burford "	1,701 92			1,701 92
Carleton Place post office		568 63		568 63
Cayuga post office		22 40		22 40
Chatham armoury	5,001 82			5,001 82
" post office		382 68		382 68
Clinton post office		91 15		91 15
Cobourg armoury	1,761 74			1,761 74
" post office		204 18		204 18
Cornwall "		108 18		108 18
Dundas "		2 00		2 00
Fort William post office, &c		1,056 37		1,056 37
Galt post office	3,240 67	45 08		3,285 75
Gananoque custom house		165 63		165 63
" post office		591 67		591 67
Goderich "		322 81		322 81
Guelph armoury	24,200 21			24,200 21
" post office	5,122 91	19 00		5,141 91
Hamilton drill hall	24,382 57			24,382 57
" post office	533 59	199 05		732 64
Hawkesbury post office	1,671 88			1,671 88
Ingersoll "		26 50		26 50
Kenora "		34 85		34 85
Kingston custom house		319 18		319 18
" field battery stables	9,824 52			9,824 52
" military college		294 56		294 56
" " stables	1,521 53			1,521 53
" military buildings, barracks for R. C. Field Artillery	14,912 86			14,912 86
" post office	982 55	228 75		1,211 30
Lindsay "		17 85		17 85
London custom house		423 67		423 67
" drill hall and armoury	232 27			232 27
" military buildings, new store building	18,526 50			18,526 50
" post office	15,639 17	251 62		15,890 79
Napanee "		4 00		4 00
Niagara Falls post office	900 00	23 00		923 00
North Bay "	4,444 66			4,444 66
Orangeville "	2,837 64	344 05		3,181 69
Orillia "		364 94		364 94
Oshawa "	4,331 25			4,331 25
Ottawa astronomical observatory	1,755 42			1,755 42
" " power for machinery			213 31	213 31
" bacteriological laboratory		155 54		155 54
" departmental buildings, reconstruction of Nepean stone facing		1,430 26		1,430 26
" departmental building (western)	22,585 42			22,585 42
" Dominion archives building	38,001 08			38,001 08
" experimental farm	7,533 91	2,338 76		9,872 67
" government printing bureau, fire-proof addition to building, also additional story and new fire-proof roof	25,122 21			25,122 21
" Majors Hill Park			5,033 26	5,033 26
" National art gallery	8,841 65		632 05	9,473 70

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
Ontario—Continued.				
Ottawa new departmental buildings (site)	332,253 24			332,253 24
" Parliament buildings, improvements	35,841 33			35,841 33
" post office, fittings and renewals	22,637 85	292 44		22,930 29
" " power for elevator			400 95	400 95
" Rideau Hall	36,292 63		24,167 40	60,460 43
" " grounds, $4,340.82; snow, $1,065.66; fuel and light, $6,375; watchman, $411			12,192 48	12,192 48
" Royal mint	65,149 11			65,149 11
" Supreme Court library	4,336 51			4,336 51
" Victoria Memorial Museum	44,835 76			44,835 76
" steel fittings and furniture	60,998 87			60,998 87
" generally, parliament grounds			11,594 36	11,594 36
" " power for elevators, &c			4,107 86	4,107 86
" " removal of snow			3,648 88	3,648 88
" " repairs and furniture		152,982 44		152,982 44
" " telephone service			9,843 09	9,843 09
Owen Sound post office	403 54			403 54
Park Hill drill shed	304 50			304 50
" post office		2 25		2 25
Pembroke "		476 30		476 30
Peterboro' armoury	509 51			509 51
" custom house		435 51		435 51
" post office	2,470 76	89 09		2,559 85
Petrolea "		1 96		1 96
Picton "		38 23		38 23
Port Arthur immigration building		18 06		18 06
" post office	1,624 35	32 90		1,657 25
Port Colborne "		386 09		386 09
Port Hope "		8 06		8 06
Prescott, Inland Revenue at distillery		60 00		60 00
" post office		126 05		126 05
Sandwich " &c	3,291 58			3,291 58
Sarnia " "		489 97		489 97
Sault Ste Marie post office		31 96		31 96
Simcoe "	67 52			67 52
Smith's Falls "		37 09		37 09
Stratford armoury	9,995 96			9,995 96
" post office		450 84		450 84
Strathroy "	1,119 34	2 40		1,121 74
St. Catharines drill hall	839 54			839 54
" post office	13 60	87 30		100 90
St. Mary's "	9,312 79			9,312 79
St. Thomas drill hall, grading grounds	1,976 90			1,976 90
" post office	6,491 25	41 90		6,533 15
Toronto, assistant receiver general's office		975 33		975 33
" barracks for permanent corps, to replace property sold to the city	15 65			15 65
" custom house, alterations and additions	26,935 47	476 54		27,412 01
" power for elevator			110 15	110 15
" drill hall, additional accommodation	75,023 43			75,023 43
" examining warehouse		315 00		315 00
" Engineer's office		33 12		33 12
" gas inspector's office		12 00		12 00
" post office, addition, alterations, furniture, fittings, &c., to make good damage by fire, April 29, 1906	25,043 75	2,081 54		27,125 29
" post office, pneumatic tube system	180 00			180 00
" " power for machine			219 31	219 31
" postal station A		295 05		295 05
" " power for machine			97 17	97 17
" " B		372 25		372 25
" " C		41 64		41 64

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
Ontario—Continued.				
Toronto, postal station F	29,993 78	51 34		30,045 12
" " H		120 21		120 21
" postal division, power for machine			15 73	15 73
Toronto Junction post office		1 05		1 05
Trenton post office		704 75		704 75
Walkerton "		216 67		216 67
" armoury	24 94			24 94
Windsor "	6 25			6 25
" post office	1,771 56	648 28		2,419 84
Wingham post office	9,543 73			9,543 73
Woodstock armoury	11,378 09			11,378 09
" post office		182 43		182 43
Heating, lighting, water, &c., for all buildings in Ontario (for details see page 33)			291,155 53	291,155 53
Totals, Ontario	1,085,610 65	177,783 67	363,431 53	1,626,825 85
Manitoba.				
Brandon experimental farm	507 90	440 50		948 40
" immigrant shed		36 95		36 95
" post office		805 21		805 21
Dauphin Dominion lands office		189 10		189 10
" immigration shed		65 00		65 00
Neepawa post office	1,166 76			1,166 76
Portage la Prairie post office		1,507 52		1,507 52
Selkirk post office	158 33			158 33
St. Boniface post office	211 10			211 10
Winnipeg custom house		243 66		243 66
" Dominion lands office		145 44		145 44
" examining warehouse		433 56		433 56
" immigration building	46,967 58	57 80		47,025 38
" " power for machinery			4 00	4 00
" old immigration building improvements	4,985 72			4,985 72
" military buildings, stores	8,225 10			8,225 10
" quarters for non-commissioned officers	2,749 74			2,749 74
" post office (old)		5,472 68		5,472 68
" " power for machine			102 00	102 00
" new post office, land and building	118,505 78			118,505 78
" post office north of C.P.R. track	549 64	22 35		571 99
Heating, lighting, water &c., for all buildings in Manitoba (for details see page 34.)			21,968 50	21,968 50
Totals, Manitoba	184,027 65	9,419 77	22,074 50	215,521 92
Alberta and Saskatchewan.				
Alameda Land Office	418 15			418 15
Battleford Dominion lands office		608 25		608 25
" immigration shed		6 00		6 00
Calgary post office, &c.	30,122 25			30,122 25
" court house		43 46		43 46
" Engineer's office		30 40		30 40
" Dominion lands office		8 00		8 00
" post office		126 45		126 45
Carnduff court house		4 85		4 85
Cattle quarantine corrals at various points	1,468 17			1,468 17
Edmonton Dominion lands and registry office		322 01		322 01
" immigration building	8,841 69	319 96		9,161 65
" inland revenue		40 00		40 00
" penitentiary	9,898 62			9,898 62
" post office	7,894 60			7,894 60
Humboldt lands office		62 06		62 06

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
Alberta and Saskatchewan—Concluded.				
Indian Head experimental farm	838 25	478 48		1,316 73
Lethbridge, Dominion lands office		82 75		82 75
" experimental farm	33 59			33 59
" immigrant shed		28 60		28 60
" post office		54 60		54 60
Lloydminster, immigration shed	1,072 70			1,072 70
Macleod court house		1 10		1 10
" custom house		8 80		8 80
Medicine Hat court house		11 75		11 75
" post office	3,767 58			3,767 58
Moosejaw post office	12,043 19	27 75		12,070 94
Moosomin, public building		2 00		2 00
" court house		18 30		18 30
Prince Albert, immigration building		165 00		165 00
" post office, &c	19,999 22	7 50		20,006 72
Red Deer Dominion lands office		330 99		330 99
Regina court house		13 35		13 35
" clerk of works office		3 00		3 00
" Dominion lands				
" office, sanitary improvements and fittings	3,054 56	202 76		3,257 32
" post office, &c	25,037 80	483 88		25,521 68
Saskatoon, immigrant building		558 85		558 85
" post office	175 87			175 87
Wolseley court house		38 95		38 95
Heating, lighting, water, &c., for all buildings in Alberta and Sashatchewan. (For details see page 35)			24,197 25	24,197 25
Totals, Alberta and Saskatchewan	124,666 24	4,089 85	24,197 25	152,953 34
British Columbia.				
Agassiz experimental farm		305 57		305 57
Atlin post office		68 00		68 00
Cumberland post office	736 75			736 75
Fernie "	507 78			507 78
Kamloops "		1,322 00		1,322 00
Ladysmith "	1,553 20			1,553 20
Nanaimo "		60 63		60 63
Nelson post office, &c	1,441 20	431 09		1,872 29
New Westminster post office, &c	12,188 57	1,019 34		13,207 91
Osoyoos post office	74 11			74 11
Rossland armoury	1,179 00	105 00		1,284 00
" post office		1,105 61		1,105 61
Vancouver examining warehouse		131 00		131 00
" immigrant shed		711 92		711 92
" post office (old) &c		2,367 65		2,367 65
" " (new building)	99,979 27			99,979 27
Victoria old custom house				
" (marine and Indian offices)		109 00		109 00
" immigration shed		5 60		5 60
" post office &c		939 14		939 14
" " power for elevator			159 84	159 84
" old post office		5 05		5 05
William's Head quarantine station, repairs, improvements, supplies &c	9,195 40	297 50		9,492 90
Heating, lighting, water, &c., for all buildings in British Columbia (for details see page 35)			22,196 45	22,196 45
Totals, British Columbia	126,855 28	8,984 10	22,356 29	158,195 67

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs and Furniture.	Staff and Maintenance.	Total.
PUBLIC BUILDINGS—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.
Yukon Territory.				
Heating, lighting, water, &c., for all buildings in Yukon Territory (for details see page 35)..			63,659 06	63,659 06
PUBLIC BUILDINGS GENERALLY.				
Advertising tenders for coal, Dominion buildings			1,603 52	1,603 52
Printing, stationery, instruments, travelling &c.			9,024 48	9,024 48
Salaries of resident clerks of works, &c.			13,283 51	13,283 51
Totals, public buildings generally			23,911 51	23,911 51

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Nova Scotia.					
Amaguadees Pond			245 96		245 96
Amherst Point wharf		3,784 93			3,784 93
Anderson's Cove breakwater		1,000 00			1,000 00
Annapolis			4,078 70		4,078 70
Apple River wharf		7,573 00			7,573 00
Arisaig breakwater			499 23		499 23
Avonport			599 77		599 77
Babin Cove			140 66		140 66
Baddeck wharf		222 23			222 23
Bailey's Brook channel protection		1,982 35			1,982 35
Barachois			326 22		326 22
Barrington Passage, improvement of passage		2,993 50			2,993 50
Barrington Passage, completion of wharf and extension of shed		311 40			311 40
Battery Point breakwater		668 40			668 40
Baxter's harbour		745 54			745 54
Bayfield breakwater			1,799 73		1,799 73
Bear Cove breakwater		3,883 92			3,883 92
Bear River			338 35		338 35
Beaver River			99 49		99 49
Blue Rock breakwater			497 61		497 61
Boisdale wharf		995 41			995 41
Bourgeois Inlet		853 60			853 60
Breton Cove			80 00		80 00
Bridgewater removal of rocks		3,063 38			3,063 38
Broad Cove marsh			350 88		350 88
Canada Creek breakwaters		750 00			750 00
Charlo's Cove breakwater		251 79			251 79
Cheticamp harbour		5,052 33			5,052 33
Church Point		1,793 12			1,793 12
Country Harbour, rem. of obstructions		699 99			699 99
Cow Bay (Port Morien)			8,447 57		8,447 57
Cribbins Point			941 21		941 21
Culloden		45 39			45 39
Delaps Cove			829 15		829 15
Digby		1,363 11			1,363 11
Drumhead		5,896 60			5,896 60
Feltzen South			238 61		238 61
Fort Lawrence		2,935 11			2,935 11
Freeport			1,762 50		1,762 50
Frude's Point		1,503 66			1,503 66
Gabarus		566 56			566 56
Georgeville		1,499 87			1,499 87
Goosebay		1,506 43			1,506 43
Grand Narrows			956 51		956 51
Habitant River, wharf at Canning		8,740 54			8,740 54
Halifax graving dock				10,000 00	10,000 00
Hall's Harbour			1,628 71		1,628 71
Hampton			299 22		299 22
Hiltz Narrows		500 00			500 00
Hunt's Point		983 08			983 08
Indian Harbour			399 99		399 99
Iona			100 00		100 00
Janvrin's island			299 99		299 99
Jeddore		47 23			47 23
Jersey Cove or Eel Cove		189 09			189 09
Joggins Mines		862 13			862 13
Judique			138 30		138 30
Kelly's Cove		7,147 10			7,147 10
Labille Point			6 75		6 75
L'Ardoise			3,868 21		3,868 21
LaHave islands	1,097 00				1,097 00

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Nova Scotia—Continued.					
Larry's River		793 51			793 51
Litchfield		499 50			499 50
Little Brook			2,400 00		2,400 00
Little Judique			261 24		261 24
Liverpool, removal of rocks		1,292 83			1,292 83
Livingstone's Cove			711 28		711 28
Mabou	5,323 44		1,416 92		6,740 36
McNair's Cove			244 58		244 58
Main-à-Dieu			274 56		274 56
Malagash		1,706 30			1,706 30
Marble Mountain		949 24			949 24
Margaree harbour			1,002 09		1,002 09
" Island			70 95		70 95
Meteghan Cove			784 16		784 16
" river, breakwater		538 00			538 00
Middle Country harbour		211 23			211 23
" River			747 57		747 57
Mill Cove		5,623 50			5,623 50
" Creek			360 21		360 21
New Campbellton, ballast wharf in Kelly's Cove		15,775 50			15,775 50
New Harbour breakwater at Black point			2,125 74		2,125 74
North East harbour		999 85			999 85
North Pond, Red islands	12,203 23				12,203 23
Parker's Cove		5,797 25			5,797 25
Parrsboro', harbour improvements		13,922 50			13,922 50
Peggy's Cove			195 65		195 65
Pereaux (Delhaven)		2,796 99			2,796 99
Petite Rivière		5,683 56			5,683 56
Pictou bar	13,584 43				13,584 43
" I. C. R. wharf	1,921 12				1,921 12
Phinney's Cove		1,495 89			1,495 89
Pleasant Bay		7,835 00			7,835 00
Poirierville		65 13			65 13
Porter's Lake		129 60	139 04		268 64
Port George		330 83			330 83
" Greville			200 00		200 00
" Hood harbour	5,099 15	14,885 13	1,615 30		21,599 58
" la Tour		4,180 78			4,180 78
" Lorne		742 96			742 96
Pugwash		7,649 00			7,649 00
Ray's Creek		1,189 85			1,189 85
Rivière Hebert			26 00		26 00
Round Hill		1,997 41			1,997 41
Scotch Cove (White Cove)		32 78			32 78
Scott's Bay		2,794 00			2,794 00
Sheet Harbour, wharf on West river		1,298 44			1,298 44
Skinner's Cove		1,759 91			1,759 91
Smithville, removal of rocks		890 00			890 00
Sydney quarantine station			249 19		249 19
" I. C. R. Coal Co.'s pier	8,356 26				8,356 26
" Whitney pier	281 12				281 12
Tatamagouche		810 27			810 27
Toney River		2,103 11			2,103 11
Tracadie			449 97		449 97
Victoria Beach		5,762 83			5,762 83
Wallace harbour		2,500 50			2,500 50
Weymouth		371 20			371 20
West Arichat		2,427 50	254 27		2,681 77
" Head (Cape Sable island)		3,437 27			3,4 7 27
Western Head			70 95		70 95

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Nova Scotia—Concluded.					
West Quoddy		2,487 63			2,487 63
Windsor	8,787 64				8,787 64
Wolfeville			224 68		224 68
Wreck Cove		500 00			500 00
Yarmouth	5,728 15	155 00			5,883 15
Generally	851 29			1,374 91	2,226 20
Totals, Nova Scotia	63,232 83	194,832 57	42,797 67	11,374 91	312,237 98
Prince Edward Island.					
Annandale pier			2,300 00		2,300 00
Bay Fortune			49 75		49 75
Brae harbour			1,098 74		1,098 74
Campbell's Cove			458 80		458 80
Charlottetown railway wharf	3,638 29				3,638 29
China Point pier			589 46		589 46
Crapaud (Victoria wharf)	7,679 06		1,695 96		8,375 02
Falconwood	3,885 94				3,885 94
Graham's Pond			699 39		699 39
Higgin's Shore pier		1,976 37			1,976 37
Hurd's Point "		1,570 49			1,570 49
Kier's Shore "		1,341 94			1,341 94
Lambert's "			1,477 65		1,477 65
Miminigash		36 83			36 83
New London			604 45		604 45
North Cardigan			1 25		1 25
Pinette pier			1,000 60		1,000 60
Port Selkirk pier repairs			82 33		82 33
Point Prim Island wharf		501 58			501 58
Pownal	3,844 08				3,844 08
Rustico harbour, Robinson island		6,532 50			6,532 50
" " breakwater, (north side)			427 65		427 65
St. Peter's Bay, breakwater, (east side)		3,896 95			3,896 95
Stephen's pier			263 98		263 98
Souris, Kright's point		950 71			950 71
South River (Murray harbour)			610 78		610 78
Summerside		5,848 04			5,848 04
Tignish		489 50			489 50
Wood Island		1,250 99			1,250 99
Generally	425 64			341 51	767 15
Totals, P. E. Island	19,473 01	24,395 90	11,360 79	341 51	55,571 21
New Brunswick.					
Anderson's Hollow			98 17		98 17
Buctouche, channel thro' beach		1,998 82			1,998 82
Campbellton	10,354 33	20,757 07			31,111 40
Cape Tormentine		9,996 88			9,996 88
Caraquet wharf		2,590 10			2,590 10
Chance Harbour		548 60			548 60
Chockfish		1,498 96			1,498 96
Clifton		1,999 99			1,999 99
Cocagne			396 68		396 68
Dalhousie		10,614 40			10,614 40
Dipper Harbour		23,964 74			23,964 74
Durham		5,529 00			5,529 00
Great Salmon river		2,859 95			2,859 95
Hopewell Cape			189 80		189 80
Little Salmon river		247 81			247 81

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
New Brunswick—Cor.					
Lord's Cove			179 43		179 43
Miscou		2,540 00			2,540 00
Mispec		82 65			82 65
North Head breakwater, Grand Manan		2,249 17			2,249 17
Oak Point		209 96			209 96
Petit Rocher		5,029 60			5,029 60
Point du Chêne			8,420 78		8,420 78
Richibucto		3,683 00			3,683 00
River Miramichi—					
Hutchin's wharf $ 939 00					
Northwest branch 2,239 62					
	3,178 62				3,178 62
River St. John—					
Belyea's wharf $ 609 25					
Cedars 661 29					
Colwell's Creek 2,557 52					
Evansdale 67 18					
Hampstead 401 36					
Oak Point 1,979 05					
Victoria wharf 2,448 40					
	8,724 05				8,724 05
River St. John, including tributaries—					
Aroostook to River de Chute $ 99 00					
Cross Lake rapids 300 00					
Edmundston wharf 300 00					
Grand Falls 100 00					
Grenier, Eddy's wharf 600 00					
Iroquois river 100 00					
Little Forks 300 00					
Little River falls 150 00					
Lower Lincoln 14 50					
Riley's Brook 175 75					
Tobique river, McCaskill's Little Falls 424 25					
Trouser's Lake 500 00					
Miller's wharf 468 45					
Sisson's Falls 200 00					
Victoria, Madawaska 50 00					
Generally 518 14					
		4,300 09			4,300 09
River St. John, wharfs, in tidal water, contribution to local government, half cost—					
Armstrong $ 324 50					
Tooleton 391 50					
Upper Sheffield 617 32					
		1,333 32			1,333 32
St. Andrews, dredging	9,599 46				9,599 46
St. John harbour, Navy island bar	2,860 67				2,860 67
" Rodney slip	66,495 49				66,495 49
" Sand Point	46,115 49				46,115 49
" Negro Point breakwater		19,357 25			19,357 25
" protection work, Fort Dufferin			499 27		499 27
Shippegan harbour		2,999 96			2,999 96
" " wharf at terminal of Caraquet railway		14,617 50			14,617 50
Tynemouth Creek			7 55		7 55
Wilson's Beach (Campobello)		1,524 37			1,524 37
Generally	851 29			1,374 90	2,226 19
Totals, New Brunswick	148,179 40	140,533 19	9,791 68	1,374 90	299,879 17

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Quebec.					
Anse à Beaufils			288 66		288 66
" à la Cave			200 88		200 88
" à l'Ilot		2,999 57			2,999 57
" aux Gascons			1,024 85		1,024 85
" " Griffons		1,341 74			1,341 74
" du Cap (Cape Cove) breakwater		4,965 51			4,965 51
" St. Jean pier			1,014 68		1,014 68
Baie des Bacons			232 13		232 13
Baie St. Paul, wharf at Cap aux Corbeaux		3,587 29			3,587 29
Barachois de Malbaie		4,607 82			4,607 82
Beauharnois	22,617 95				22,617 95
Beloeil	502 36		937 52		1,439 88
Berthierville	10,534 46				10,534 46
Bic Harbour, wharf at Pointe à Côté		5,969 64			5,964 64
Bonaventure			400 00		400 00
Boucherville			243 67		243 67
Buckingham	621 13				621 13
Cannes de Roches (Corner of the Beach)		2,023 64			2,023 64
Canton Fabre (Lake Temiskaming) wharf		2,019 36		10 00	2,029 36
Cap à l'Aigle			455 22		455 22
Caplin			699 96		699 96
Caplin (Robicheaud's approach to beach)		500 00			500 00
Carleton			236 63		236 63
Chambly Basin	2,489 27				2,489 27
Chateauguay	6,084 45	1,485 61			7,570 06
Chicoutimi		4,801 10	136 95		4,938 05
Clarke City, Seven Islands		15,383 44			15,383 44
Como	16,539 20				16,539 20
Côte Ste Catherine		1,379 31			1,379 31
Cross Point		4,963 14			4,963 14
Deschambault		2,835 76			2,835 76
Desjardins (Allumette Island.)		2,991 28			2,991 28
D'Israëli		706 84			706 84
Doucet's Landing	28,775 88	468 28			29,244 16
Douglastown		283 12			283 12
East Templeton		51 07			51 07
English River			1,810 14		1,810 14
Escoumains		607 20			607 20
Fassett	965 30				965 30
Father Point			7,387 95		7,387 95
Gatineau Point, wharf and protection wall			2,306 45		2,306 45
Graham	78 00		377 56		455 56
Grandes Bergeronnes			562 99		562 99
Grande Rivière de Beaupré		6,625 07			6,625 07
Grande Rivière de Gaspé			648 15		648 15
Grands Mechins		291 56			291 56
Grande Vallée			140 00		140 00
Grondines		2,508 68			2,508 68
Grosse Isle Quarantine Station, wharf extension		548 25			548 25
Hull				137 00	137 00
Iberville			140 84		140 84
Isle aux Noix	6,410 25		232 25		6,642 50
" Foins	26,013 75				26,013 75
Isle Perrot, wharf on South Side			856 07		856 07
Isle Verte		1,199 99			1,199 99
Jersey Cove			198 93		198 93
Lac à Beaulieu			208 25		208 25
Lachine			1,277 63		1,277 63
Lanoraie			262 67		262 67

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Quebec—Con.					
Lake Nominingue wharfs		597 42	54 97		652 39
Lake St. John piers:—					
Roberval $1,897 85					
Rivière du Moulin 676 22					
Generally 670 01					
			3,244 08		3,244 08
Lake St. John dredging—Roberval	4,897 94				4,897 94
Lake St. Francis (Beauce) wharfs:—					
Coleraine $ 249 91					
Lambton 2,764 23					
		3,014 14			3,014 14
Laprairie ice piers, &c		13,500 00			13,500 00
L'Assomption	6,670 50				6,670 50
Lavaltrie		43 15			43 15
Les Eboulements			892 56		892 56
Les Ecureuils			653 71		653 71
Le Tableau, descente des Femmes		2,498 63			2,498 63
Lévis graving dock				10,344 19	10,344 19
L'Ile d'Alma—Removal of rocks		996 52			996 52
Little Cape			100 00		100 00
Little Lake Escoumains			323 20		323 20
Longueuil			6,905 04		6,905 04
Lotbinière		1,233 05			1,233 05
Lower St. Lawrence:—					
Anse du Cap $100 00					
La Fonderie 100 00					
Ruisseau Pelletier 100 00					
			300 00		300 00
Magdalen Island breakwaters and piers:					
Amherst $1,050 19					
Bassin 1,191 31					
Grande Entrée 2 70					
Grindstone 4,547 98					
Pointe à Elie 7,031 10					
		13,823 28			13,823 28
Maguasha			299 57		299 57
Marsouin		2,006 35			2,006 35
Masson		3,753 51			3,753 51
Mille Vaches		5,018 68			5,018 68
Mistook (Delisle)		1,995 06			1,995 06
Mont Louis			36 61		36 61
Montmagny, wharf on the Bassin		355 50			355 50
Montmorency Falls, cribwork revetment wall		3,256 27			3,256 27
Montreal harbour		18,229 82			18,229 82
Murray Bay			688 19		688 19
New Carlisle		11,386 19			11,386 19
Newport			261 36		261 36
Nicolet	3,960 15		5,064 75		9,024 90
Notre Dame du Portage		5,799 50			5,799 50
Oka	10,741 50				10,741 50
Papineauville	200 00				200 00
Paspebiac			2,487 92		2,487 92
Peel Head Bay		9,311 56			9,311 56
Percé Wharf (North cove)		12,994 00			12,994 00
Petite Bergeronnes		972 20			972 20
Pierreville	863 15				863 15
Pointe aux Esquimaux			567 07		567 07
" aux Trembles (Portneuf)		5,376 27			5,376 27
" Claire			150 00		150 00
" St. Pierre		3,652 24			3,652 24
" Valois			964 95		964 95
Port Daniel			901 28		901 28

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Quebec—Continued.					
Portneuf wharf		2,983 44			2,983 44
Port St. Francis	324 00				324 00
Quebec harbour	7,387 62	144,017 35			151,404 97
Repentigny		5,079 00			5,079 00
Rigaud	8,669 70				8,669 70
Rimouski	17,724 80	20,749 31			38,474 11
Rivers Ashouapmouchouan and Peribonka—					
Peribonka $ 1,144 71					
St. Felicien 1,638 75					
St. Prime 2,164 48					
Generally 45 00					
		4,992 94			4,992 94
Rivière aux Renards		5,423 50			5,423 50
" à la Pipe		2,981 06			2,981 06
" Bas de Soie			508 75		508 75
" Batiscan (mouth)	7,749 37				7,749 37
" Blanche			1,499 97		1,499 97
" du Lièvre, lock			532 90	4,455 49	4,988 39
" du Lièvre, dredging	861 20				861 20
" des Vases		1,494 68			1,494 68
" du Loup (Fraserville)		3,741 04			3,741 04
" du Loup (en haut), dredging and improvements at mouth	15,778 25				15,778 25
" Godefroy	9,372 25	4,406 00			13,778 25
" Jesus	8,088 50		232 61		8,321 11
" Maskinongé	7,512 16				7,512 16
" Ouelle	366 57		9,990 30		10,356 87
" Ottawa (Blanche shoals)	26,375 84				26,375 84
" Richelieu, ice piers		767 36			767 36
" Saguenay, dredging	35,029 55				35,029 55
" St. Francis	10,525 68	629 20			11,154 88
" St. Louis, improvements	4,297 92	2,848 81		100 65	7,247 38
" St. Maurice, channel between Grande Piles and La Tuque	9,198 08				9,198 08
" St. Maurice, dredging channels at mouth	21,955 51				21,955 51
" Verte, improvements at mouth		999 75			999 75
Sabrevois			104 51		104 51
Sault au Mouton			476 03		476 03
St. Alexis			43 78		43 78
St. Alphonse (de Bagotville)		977 08			977 08
St. Anicet			931 85		931 85
St. André de Kamouraska			1,196 28		1,196 28
St. Andrews	18,213 05				18,213 05
Ste. Anne de Chicoutimi		1,016 30			1,016 30
Ste. Anne des Monts		4,999 76			4,999 76
St. Blaise		575 84			575 84
St. Charles Borromée		3,007 52			3,007 52
St. Dénis	555 23				555 23
Ste. Emelie			157 09		157 09
St. Fidèle			289 21		289 21
St. François, Island of Orleans		16,031 10			16,031 10
St. François de Sales			130 51		130 51
St. Fulgence		3,001 25			3,001 25
St. Ignace de Loyola			163 91		163 91
St. Irénée			1,839 68		1,839 68
St. Jean des Chaillons		14,387 70			14,387 70
St. Jean, Island of Orleans	633 60	283 63			917 23
St. Laurent, Island of Orleans			926 10	3 00	929 10
St. Placide	19,985 21				19,985 21
St. Simeon		1,669 22	573 17		2,242 39
St. Sulpice		2,300 00			2,300 00

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Quebec—Continued.					
St. Timothée			1,589 39		1,589 39
St. Valier		248 79			248 79
St. Zotique			1,752 53		1,752 53
Sorel, deep water wharf		408 62			408 62
" ice piers		2,590 55			2,590 55
" dredging	1,021 02				1,021 02
Tadousac			313 14		313 14
Terrebonne			111 37		111 37
Three Rivers harbour		57,897 34			57,897 34
Thurso	352 09				352 09
Trois Pistoles			2,599 84		2,599 84
Verdun			1,224 98		1,224 98
Ville Marie (Lake Temiskaming)	1,464 82	1,779 05			3,243 87
Yamaska Lock-dam			1,590 84	1,224 13	2,814 97
" River, dredging	6,244 74				6,244 74
Generally	19,498 28			9,026 08	28,524 36
Totals, Quebec	408,150 28	507,244 80	74,955 03	25,300 54	1,015,650 65
Ontario.					
Amherstburg, improvement of channel	7,913 34	1,406 49			9,319 83
Belle River, dredging channel	2,556 50				2,556 50
Belleville	3,375 74				3,375 74
Barrie (Allandale)			300 77		300 77
Bayfield			795 61		795 61
Beaverton	3,266 50	494 93			3,761 43
Blanche River		5,574 98			5,574 98
Blind River	947 20				947 20
Bracebridge			427 40		427 40
Bronte		2,199 00			2,199 00
Bruce Mines			100 00		100 00
Burlington channel			5,241 59	1,435 39	6,676 98
Cobourg	5 65		1,955 29		1,960 94
Colchester		1,596 68			1,596 68
Collingwood	123,073 88				123,073 88
Collingwood graving dock				15,000 00	15,000 00
Cumberland		1,186 76			1,186 76
Echo Bay		400 00			400 00
Fort William (Kaministiquia River)	145,944 59				145,944 59
Goderich	17,957 96	1,854 68			19,812 64
Graham's Bay			260 30		260 30
Grand Bend			699 64		699 64
Haileybury (Lake Temiskaming)		1,171 20		20 00	1,191 20
Hamilton	1,893 49	30,996 93			32,890 42
Hawkesbury	143 44				143 44
Head River			18 00		18 00
Honora			211 66		211 66
Jeannette's Creek	8,800 75	3,603 27			12,404 02
Jordan Harbour, steel bridge		1,575 00	445 48		2,020 48
Kincardine harbour	489 00		999 96		1,488 96
Kingston graving dock				4,213 41	4,213 41
Kingsville	1,894 22		256 40		2,150 62
Leamington			25 00		25 00
Little Current	144,436 70				144,436 70
Magnet channel		833 91			833 91
Mallorytown			1,307 05		1,307 05
McGregor's Creek			2,466 13		2,466 13
Matchedash Bay—Channel between Fesserton and Waubauchene	11,253 04				11,253 04
Meaford	13,709 12				13,709 12
Midland Harbour	69,398 80		533 86		69,932 66

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Ontario—Con.					
Mitchell's Bay		1,100 40			1,100 40
Monetville, Lake Nipissing		882 58			882 58
Newcastle			299 05		299 05
New Liskeard	2,268 50				2,268 50
Nigger Island Channel (Bay of Quinté)	10,835 90				10,835 90
North Port	9,658 80				9,658 80
Oliphant		598 77			598 77
Orillia			19 00		19 00
Ottawa River (opposite South Nation)	2,909 30				2,909 30
Owen Sound	15,220 34				15,220 34
Parry Sound		1,499 63			1,499 63
Parry Sound Island			2,495 09		2,495 09
Pembroke			78 09		78 09
Penetanguishene	13,500 00				13,500 00
Point Edward	17,227 22				17,227 22
Port Arthur	67,990 91			1,402 50	69,393 41
Port Colborne		22,653 73			22,653 73
Port Burwell	31,190 78	11,651 13			42,841 91
Port Bruce	2,122 00		2,877 83		4,999 83
Port Dover	4,066 80		640 93		4,707 73
Port Elgin	3,199 50				3,199 50
Port Hope			3,259 49		3,259 49
Port Maitland	110 60				110 60
Port Stanley	6,587 99	31,586 50	6,068 95		44,243 44
Rainy River	258 05				258 05
Rama		362 33			362 33
River Otonabee	6,999 58				6,999 58
Roach's Point		2,052 88			2,052 88
Rockland	295 10				295 10
Rondeau Harbour	5,609 82		4,500 00		10,109 82
Rosseau		1,800 00			1,800 00
Sarnia	2,979 04				2,979 04
Saugeen River	4,325 00	672 94			4,997 94
Sault Ste. Marie		6,322 66			6,322 66
Severn River at McDonald's Chute		1,098 59			1,098 59
Severn River at Washago		1,451 04			1,451 04
Silverwater, Manitoulin Island		3,640 47			3,640 47
Sheguindah			374 91		374 91
Southampton			114 45		114 45
South Nation River	200 00				200 00
St. Mary's River	834 02				834 02
St. Joseph, Lake Huron			252 50		252 50
Sturgeon Falls	6,112 76				6,112 76
Sydenham River	3,680 00				3,680 00
Toronto harbour, eastern entrance	7,358 92	3,243 33	3,070 47		13,672 72
" balance due Murray & Cleveland		63,685 14			63,685 14
Treadwell		2,704 92			2,704 92
Trenton, dredging, Trent River	10,081 37				10,081 37
Wampoos East (Bay of Quinte)	1,029 90				1,029 90
Wendover		1,956 33			1,956 33
Wiarton		2,907 70			2,907 70
Wolfe Island			192 93		192 93
Generally	8,689 55			3,359 94	12,049 49
Totals, Ontario	802,401 67	214,764 90	40,287 83	25,431 24	1,082,885 64
Manitoba.					
Assiniboine River	2,004 40				2,004 40
Gypsumville	5,321 41				5,321 41
Lake Francis, outlet		271 40			271 40

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
HARBOURS AND RIVERS—*Con.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Manitoba—Con.					
Red River, channel at mouth	11,173 27	477 35			11,650 62
" St. Andrew's Rapids		97,213 14			97,213 14
Selkirk Wharf		3,067 91			3,067 91
West Selkirk	990 94				990 94
Winnipegosis, dredging channel, mouth of Mossy River	4,537 04				4,537 04
Winnipeg River, Manitou Rapids		30 00			30 00
Generally				1,796 64	1,796 64
Totals, Manitoba	24,027 06	101,059 80		1,796 64	126,883 50
Saskatchewan and Alberta.					
Last Mountain Lake		2,549 81			2,549 81
Lesser Slave River		654 62			654 62
North Saskatchewan River, survey		551 69			551 69
Generally				500 26	500 26
Totals, Saskatchewan and Alberta		3,756 12		500 26	4,256 38
British Columbia.					
Campbell River		2,917 78			2,917 78
Columbia River—					
Above Golden $ 2,484 26					
Below " 66 42					
At Revelstoke 26,923 36					
At Arrow Head 522 65					
		29,996 69			29,996 69
Coquitlam River		953 78			953 78
Courtney River		2,995 25			2,995 25
Esquimalt, graving dock				10,130 21	10,130 21
Fraser River, ship channel	30,929 25	19,984 13			50,913 38
" between Quesnel and Soda Creek		1,910 02			1,910 02
Ladysmith		3 85			3 85
Kennedy Lake		1,430 57			1,430 57
Kootenay River, between Kootenay Landing and international boundary		1,937 98			1,937 98
North Thompson River		874 87			874 87
Sidney Island		1,998 70			1,998 70
Skeena River		4,722 24			4,722 24
South Thompson River, removal of bars		4,940 19			4,940 19
Victoria harbour	26,096 14				26,096 14
William's Head, quarantine station			7,425 61		7,425 61
Generally				2,101 14	2,101 14
Totals, British Columbia	57,025 39	74,666 05	7,425 61	12,231 35	151,348 40
Yukon Territory.					
No expenditure					
Harbours and Rivers Generally.					
General expenses of staff, &c	3,450 70			6,032 48	9,483 18

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
DREDGES AND DREDGING PLANT.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Maritime Provinces		192,660 40	*266 50		192,926 90
Ontario and Quebec		86,948 61	43,168 24		130,116 85
Manitoba		8,616 47	2,547 23		11,163 70
British Columbia		84,041 69	20,339 80		104,381 49
Totals, dredges and dredging plant		372,267 17	66,321 77		438,588 94
SLIDES AND BOOMS.					
River Richelieu (Belœil)				122 45	122 45
" Saguenay		2,117 81		4,792 85	6,910 66
" St. Maurice		29,863 22		29,473 39	59,336 61
Ottawa District.					
Black River			16 56		16 56
Coulonge River			9 80		9 80
Gatineau River			4,506 14		4,506 14
Madawaska River			81 97		81 97
Ottawa River			1,232 57	19,214 53	20,447 10
Petewawa River			4,298 29		4,298 29
River du Lièvre			66 75		66 75
Newcastle District			247 92	83 33	331 25
Collection of Slide and Boom Dues				2,508 50	2,508 50
Totals, Slides and Booms		31,981 03	10,460 00	56,195 05	98,636 08
ROADS AND BRIDGES.					
Ontario and Quebec.					
Bryson Bridge, Ottawa River		3,180 32			3,180 32
Portage du Fort Bridge over the Ottawa			5 59		5 59
Ottawa City, Bridges and Streets maintained by Government.					
Chaudière bridges and approaches			1,620 22		1,620 22
Laurier Bridge			10 44		10 44
Sappers and Dufferin Bridges and Wellington Street			5,994 14	4,075 28	10,069 42
Lighting all the above				1,966 81	1,966 81
Northwest Provinces and British Columbia.					
Battleford Bridge, Sask		1,895 69			1,895 69
Calgary, Langevin Bridge, Alta			93 85		93 85
Edmonton Bridge, Alta			2,946 28		2,946 28
Shellmouth Bridge, Man		20,164 08			20,164 08
Whitemouth Road		2,508 85			2,508 85
Totals, Roads and Bridges		27,748 94	10,670 52	6,042 09	44,461 55

* A further sum of $22,862.52 expended for repairs to dredges in the Maritime Provinces, considered as inseparable from working expenses, has been apportioned with the cost of dredging the various harbour in the Maritime Provinces. See pp. 15 to 18.

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
TELEGRAPH LINES.	$ cts.	$ cts.	$ cts.	$ cts.
Newfoundland.				
Cape Ray (subsidy)			250 00	250 00
Nova Scotia.				
Barrington Passage to Newellton	300 00			300 00
Cape Breton lines	4,360 40		9,215 94	13,576 34
Prince Edward Island.				
Prince Edward Island and Mainland (subsidy)			920 33	920 33
New Brunswick.				
Bay of Fundy line			1,569 29	1,569 29
Escuminac line			216 00	216 00
Quebec (Mainland.)				
Father Point (subsidy)			500 00	500 00
North Shore St. Lawrence, east of Bersimis	1,101 50	2,972 01	14,100 44	18,173 95
" " west "	5,683 45	724 36	1,327 16	7,734 97
Saguenay River lines, northeast side	983 00		4,806 28	5,789 28
" " southwest side	401 94	801 92	4,806 28	6,010 14
Quebec (Islands.)				
Anticosti			4,073 74	4,073 74
Belle Isle (Marconi system)	3,042 60			3,042 60
Grosse Isle. (Two Marconi Stations)	3,500 00			3,500 00
" cable and wire line			2,948 76	2,948 76
Isle aux Coudres (subsidy)			150 00	150 00
Magdalen Island lines			1,975 19	1,975 19
Cable Ship, *Tyrian*		38,535 91	29,774 90	68,310 81
Generally, Gulf and Maritime Provinces			8,034 28	8,034 28
Ontario.				
Pelee Islands		524 75	236 21	760 96
Saskatchewan and Alberta.				
Moose Jaw-Wood Mountain		417 75		417 75
Qu'Appelle-Edmonton-Athabaska	515 15	991 30	27,223 00	28,729 45
British Columbia and Yukon.				
Alberni-Cape Beale			382 45	382 45
Alberni-Clayoquot			3,258 45	3,258 45
Ashcroft-Dawson		6,015 63	163,747 71	169,763 34
Golden-Windermere			2,188 28	2,188 28
Kamloops-Nicola-Penticton	2,167 40		9,642 35	11,809 75
Nanaimo-Comox			3,756 87	3,756 87
Vancouver-Salt Spring			249 90	249 90
Victoria-Cape Beale			5,359 75	5,359 75
Generally, B. C.			1,293 41	1,293 41
Telegraph service, Generally			1,559 44	1,559 44
Totals, Telegraphs	22,055 44	50,983 63	303,566 41	376,605 48

SESSIONAL PAPER No. 19

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
MISCELLANEOUS.	$ cts.	$ cts.	$ cts.	$ cts.
Arbitration and awards			1,750 00	1,750 00
Cement testing laboratory	3,759 31			3,759 31
Surveys and Inspections—				
Georgian Bay to Montreal, waterway			99,508 07	99,508 07
Ottawa River, headwaters and tributaries			1,849 00	1,849 00
Generally			44,606 95	44,606 95
Non-permanent staffs—				
Secretary and Accountant's Branch			46,119 33	46,119 33
Chief Architect's Branch			37,269 26	37,269 26
Chief Engineer's Branch			95,354 54	95,354 54
Telegraph Service Branch			4,833 30	4,833 30
Public Works Agency, B C.			979 93	979 93
Technical and other books of reference			391 82	391 82
Transportation Commission			750 00	750 00
Deep Waterways Commission			11,997 07	11,997 07
Grosse Isle Quarantine Steamer *Challenger* reconstruction		2,167 31		2,167 31
Gratuities.				
Widow of Capt. John Devereux			1,000 00	1,000 00
Children of the late Mme. E. J. Blain de St. Aubin			91 66	91 66
Children of the late P. Purcell			200 00	200 00
Widow of the late John Boyd			66 67	66 67
" J. M. Draper			133 33	133 33
" M. Desjardins			183 33	183 33
" J. A. Parr			183 33	183 33
Catherine A. Davis, widow of late J. A. Davis			500 00	500 00
Emma Ryder, mother of the late W. E. Ryder			500 00	500 00
Totals, Miscellaneous	3,759 31	2,167 31	348,267 59	354,194 21

PART II.—STATEMENT A.—EXPENDITURE—*Continued.*

Name of Work.	Dredging	Construction and Improvements.	Repairs.	Staff and Maintenance.	Total.
RECAPITULATION.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Totals, Public Buildings—					
Nova Scotia		124,618 19	7,425 42	26,675 54	158,719 15
Prince Edward Island		7,310 43	1,534 77	5,618 82	14,464 02
New Brunswick		35,458 77	10,401 89	26,229 73	72,090 39
Quebec		172,083 90	30,682 55	95,606 33	298,372 78
Ontario		1,085,610 65	177,783 67	363,431 53	1,626,825 85
Manitoba		184,027 65	9,419 77	22,074 50	215,521 92
Alberta and Saskatchewan		124,666 24	4,089 85	24,197 25	152,953 34
British Columbia		126,855 28	8,984 10	22,356 29	158,195 67
Yukon				63,659 06	63,659 06
Public buildings generally				23,911 51	23,911 51
Totals, Harbours and Rivers—					
Nova Scotia	63,232 83	194,832 57	42,797 67	11,374 91	312,237 98
Prince Edward Island	19,473 01	24,395 90	11,360 79	341 51	55,571 21
New Brunswick	148,179 40	140,533 19	9,791 68	1,374 90	299,879 17
Quebec	408,150 28	507,244 80	74,955 03	25,300 54	1,015,650 65
Ontario	802,401 67	214,764 90	40,287 83	25,431 24	1,082,885 64
Manitoba	24,027 06	101,059 86		1,796 64	126,883 50
Alberta and Saskatchewan		3,756 12		560 26	4,256 38
British Columbia	57,025 39	74,666 05	7,425 61	12,231 35	151,348 40
Yukon					
Harbours and rivers generally	3,450 70			6,032 48	9,483 18
Totals, dredges and dredging plant		372,267 17	66,321 77		438,588 94
" slides and booms		31,981 63	10,460 00	56,195 05	98,636 08
" roads and bridges		27,748 94	10,670 52	6,042 09	44,461 55
" telegraph lines		22,055 44	50,983 63	303,566 41	376,605 48
" miscellaneous		3,759 31	2,167 31	348,267 59	354,194 21
Grand totals of expenditure	1,525,940 34	3,579,696 33	577,543 86	1,472,215 53	7,155,396 06

ADJUSTMENT WITH PUBLIC ACCOUNTS.

Total Public Works Capital as per Public Accounts 1906-07, part iii. page 38	$ 1,797,871 16	
Less River St. Lawrence Ship Channel, administered by Dept. Marine and Fisheries	619,860 55	
		$ 1,178,010 61
Total Public Works, Income (Public Accounts, part iii. p. 51)		5,520,571 42
" Revenue (" " 56)		456,814 03
Grand total		$ 7,155,396 06

PART II.—STATEMENT B.—Showing the Cost of the following Services for each Public Building, &c. (the total for each Province being carried into statement 'A').

Name of Building.	Rents.	Salaries of and Supplies for Engineers	Heating.	Lighting.	Water.	Total.
Nova Scotia.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Amherst post office, &c.		345 83	353 08	106 40	16 00	821 31
Annapolis post office, &c.		333 30	184 49	110 25	20 00	648 04
Antigonish post office, &c.		322 69	263 63	40 71	5 00	632 03
Arichat post office, &c		125 00	155 30			280 30
Baddeck post office, &c.		220 20	215 20	33 50		468 90
Dartmouth post office.		210 30	81 00	104 96	27 40	423 66
Digby post office, &c.		363 50	235 00	208 56	33 66	840 72
Guysboro' post office, &c		41 60	185 80	27 65		255 05
Halifax Asst. Receiver General's office.	417 40	52	71 55	55 08		544 03
" Appraiser's office.	500 00	352 45	189 40	49 13	79 31	1,170 29
" custom house (new).		269 69	218 77			488 46
" Dominion building.		2,590 39	421 89	1,631 02	348 01	4,991 31
" drill shed		950 00				950 00
" Engineer's office	187 25					187 25
" immigrant shed		495 00	500 14	607 40		1,602 54
" immigration detention building (Trachoma).	162 50		545 75	61 19		769 44
Kentville post office, &c.		341 20	103 08	120 00	50 00	614 28
Liverpool post office, &c		346 96	185 00	124 34	13 50	669 80
Lunenburg post office, &c.		250 00	212 75	77 55	44 25	584 55
Nappan experimental farm			83 57			83 57
New Glasgow post office, &c.		338 30	220 43	284 61	50 00	893 34
North Sydney post office, &c		333 30	236 80	684 34	24 00	1,278 44
Pictou custom house		5 27	216 75	15 40	25 00	262 42
" post office.		440 22	191 45	166 11	25 00	822 78
Springhill post office, &c		410 97	227 40	170 60	30 00	838 97
Sydney post office, &c		433 83	326 00	1,055 33	58 00	1,873 16
Sydney Mines post office, &c.		359 38	142 20	181 04	30 00	712 62
Truro post office, &c.		356 17	244 13	284 58	30 00	914 88
Windsor post office, &c.		347 02	271 43	218 05	25 00	861 50
Yarmouth post office, &c.		334 10	369 00	452 80	36 00	1,191 90
Totals for Nova Scotia (carried to Statement A, page 7)	1,267 15	10,916 67	6,650 99	6,870 60	970 13	26,675 54
Prince Edward Island.						
Charlottetown Dominion building		2,310 01	671 37	871 61	168 75	4,021 74
" Engineer's office	122 00		6 70			128 70
Montague post office, &c		144 81	245 34	23 59		413 74
Souris post office, &c.		96 88	149 27			246 15
Summerside post office, &c.		357 67	358 88	91 94		808 49
Totals for P. E. Island (carried to Statement A, page 7)	122 00	2,909 37	1,431 56	987 14	168 75	5,618 82
New Brunswick.						
Bathurst post office, &c.		398 16	337 33	641 15		1,376 64
Campbellton post office, &c.		333 30	431 18	194 40	34 02	992 90
Carleton, St. John West, post office, &c.		90 85	63 15	31 97	8 50	194 47
Chatham post office, &c.		250 00	426 29	290 12	13 50	979 91
Dalhousie post office, &c.		346 65	292 95	26 58		666 18
Fredericton post office, &c		370 10	415 16	755 06	25 50	1,565 82
Marysville post office, &c.		125 00	27 28	21 90		174 18
Moncton post office, &c.		339 30	281 29	330 63	100 50	1,051 72
Newcastle post office, &c.		333 30	368 86	133 05	74 85	910 06

PART II.—STATEMENT B.—EXPENDITURE—*Continued.*

Name of Building.	Rents.	Salaries of and Supplies for Engineers	Heating.	Lighting.	Water.	Total.
New Brunswick.—Concluded.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Richibucto post office, &c.		337 30	207 00	176 14		720 44
St. John custom house		1,653 96	1,717 97	426 85	499 32	4,298 10
" cattle quarantine		277 00			406 83	683 83
" detention hospital		277 00				277 00
" immigrant building	526 33	900 00	1,522 73	355 25	19 70	3,324 01
" post office		1,549 87	777 09	2,266 35	472 33	5,065 64
" savings bank		3 00	288 42	91 41	13 14	395 97
Tracadie lazaretto		180 00	936 64			1,116 64
St. Stephen's post office, &c		340 88	157 50	231 60	48 00	777 98
Sussex post office, &c		251 75	361 70	86 48	25 00	724 93
Woodstock post office, &c.		361 50	169 34	106 67	17 00	654 51
" armoury		275 80	3 00			278 80
Totals for New Brunswick (carried to statement A, page 8)	526 33	8,994 72	8,784 88	6,165 61	1,758 19	26,229 73
Quebec.						
Acton Vale post office		379 10	224 70	175 00	12 00	790 80
Aylmer post office		83 30	278 79	86 80	24 75	473 64
Berthierville post office		69	141 34	74 20	32 00	248 23
Buckingham "		109 50	214 28	67 10	27 90	418 78
Coaticook "		345 50	279 30	131 61	40 00	796 41
Drummondville post office		302 48	168 75	100 00	8 75	579 98
Dundee custom house			33 75			33 75
Fraserville post office, &c		336 02	402 50	57 91	150 00	946 43
Granby post office, &c		259 76	243 70	141 64	150 00	795 10
Grosse Isle quarantine station			14 50			14 50
Hochelaga post office		166 60	161 50	119 72	61 14	508 96
Farnham "		87 80	106 70	71 10	10 00	275 60
Hull "		125 00	233 00	346 96	127 65	832 61
Joliette "		345 49	252 09	63 10	54 00	714 68
Lachine "		82 37	155 10	53 00	22 14	312 61
Laprairie "		139 43	174 35	11 70	45 00	370 48
L'Assomption "		208 21	158 50	129 89	50 00	546 60
Longueuil "		256 11	170 00	129 28	20 81	576 20
Montmagny "	414 00		89			414 89
Montreal						
" Clerk of Works	57 75	5 50				63 25
" Civil Service Exam. office	150 00					150 00
" custom house	4 00	2,992 68	909 35	598 54	452 11	4,956 68
" Dominion public buildings		1,275 04				1,275 04
" drill hall		700 00				700 00
" Engineer's office	645 40	10 00		9 61	37 83	702 84
" examining warehouse	27 50	8,350 82	2,972 79	3,150 43	644 13	15,145 67
" immigration office	540 47		327 17	32 54	197 65	1,097 83
" inland revenue office		463 60	285 87	64 33	101 91	915 71
" post office (main)	114 50	11,069 81	992 22	8,220 17	867 24	21,263 94
Branches :—						
sorting room, Windsor Station, C.P.R	996 36					996 36
Northern Receiving H. (333 St. Lawrence)	200 00		27 00	111 06	15 52	353 58
Eastern Receiving (226a Amherst)	225 00		13 50			238 50
"Station B" (St. Catherine West)	1,457 22	222 01	114 94	125 28	45 62	1,965 07
St. Cunegonde P.O. (Richelieu St.)	1,020 83					1,020 83
St. Louis du Mile End P.O.		371 19	266 99	80 66	32 00	750 84
Westmount, 190 Greene St.	300 00					300 00
Superintendent Public Buildings, 414 Merchants Bank Building	50 00					50 00

PART II.—STATEMENT B.—EXPENDITURE—*Continued.*

Name of Building.	Rents.	Salaries of and Supplies for Engineers	Heating.	Lighting.	Water.	Total.
Quebec—Concluded.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Quebec citadel buildings	17 00	411 00	570 13	131 13		1,129 26
" Clerk of Works office	30 92	184 00				214 92
" culler's office		407 30	271 22			678 52
" custom house		513 70	881 76	395 00	800 00	2,590 46
" Engineer's office	422 00	93 00				515 00
" examining warehouse		1,204 97	796 59	67 21	450 00	2,518 77
" immigration building		25 00	348 36	1,121 50		1,494 86
" observatory				71 08	50 00	121 08
" post office	27 00	1,361 34	830 24	676 79	750 00	3,645 37
" Queen's wharf building (Marine, Signal Service, culler's, Gas Inspection, Weights and Measures		160 00	835 25		750 00	1,745 25
" Trachoma hospital	75 00		685 78	166 69		927 47
" St. Roch post office			47 80	23 81		71 61
" G. T. Ry. building, 5 Duford st.	375 00					375 00
Peribonka immigrant shed	8 00	250 00	524 60	6 61		789 21
Richmond post office, &c		356 87	248 60	141 65	25 00	772 12
Rimouski post office, &c		125 00	204 54	25 09	37 50	392 13
Roberval immigration shed		250 00	120 00	82 49		452 49
Sherbrooke post office, &c		529 67	410 28	392 18	37 50	1,369 63
Sorel post office, &c		477 67	417 47	764 02	250 00	1,909 16
St. Henri post office, &c			139 74	48 00	21 96	209 70
St. Hyacinthe post office, &c		436 30		356 40	150 00	942 70
" inland revenue		345 67	163 92	48 71	100 00	658 30
" drill hall		166 13	399 36			565 49
St. Jérôme post office, &c		341 10	314 80	100 00		755 90
St. John's post office, &c		291 60	117 48	188 00	60 00	657 08
Terrebonne post office, &c		286 95	202 32	93 86	15 00	598 13
Thetford Mines post office, &c		144 05	286 98	355 82	9 75	796 60
Three Rivers drill hall		11 29				11 29
" custom house		462 38	617 97	168 70	168 00	1,417 05
" post office		540 02	375 93	303 85	60 50	1,280 30
Valleyfield post office, &c		370 10	410 59	120 17		900 86
Victoriaville post office, &c		79 05	147 25	186 89	37 53	450 72
Totals for Quebec (carried to Statement A, page 9)	7,157 95	38,513 06	19,691 64	20,187 28	7,002 89	92,552 82
Ontario.						
Alexandria post office, &c		214 61	148 50			363 11
Almonte post office, &c		342 70	199 75	45 88	50 00	638 33
Amherstburg post office, &c		339 63	194 00	86 75	26 25	646 63
Arnprior post office, &c		352 30	285 32	138 29	23 99	799 90
Barrie post office, &c		376 73	240 25	226 02	50 00	893 00
Belleville post office, &c		621 72	495 92	713 17	83 25	1,914 06
Berlin post office, &c		383 90	269 67	240 94	15 77	910 28
Bowmanville post office, &c		343 90	141 50	105 74	10 00	601 14
Brampton post office, &c		343 10	188 70	191 04	18 00	740 84
Brantford post office, &c		524 47	463 47	255 87	38 00	1,281 81
Bridgeburg post office, &c		258 43	206 25	32 85	16 00	513 53
Brockville post office, &c		411 46	379 00	439 88	85 00	1,315 34
Carleton Place post office, &c		252 00	167 25	140 10		559 35
Cayuga post office, &c		55 10	122 54	46 65		224 29
Chatham drill hall		200 00				200 00
" post office, &c		479 81	238 96	201 70	21 25	941 72
Clinton post office, &c		117 68	277 72	112 62		508 02
Cobourg post office, &c		362 71	219 60	284 46	34 13	900 90
Cornwall post office, &c		409 45	290 00	401 95	37 50	1,138 90
Deseronto post office, &c		384 80	276 05	274 79	29 25	964 89
Dundas post office	250 00	41 60	40 00	39 50		371 10

PART II.—STATEMENT B.—EXPENDITURE—*Continued.*

Name of Building.	Rents.	Salaries of and Supplies for Engineers	Heating.	Lighting.	Water.	Total.
Ontario—Continued.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Fort William post office		350 80	443 20	144 39	45 27	983 66
Galt post office		352 58	244 25	36 92	13 25	647 00
Gananoque custom house			148 13	94 00		242 13
" post office		21 00	119 75	143 50	5 29	289 54
Goderich post office, &c.		342 60	244 38	143 69	45 00	775 67
Guelph post office, &c.		360 19	481 10	597 93	18 72	1,457 94
Hamilton post office, &c		1,808 46	1,009 76	907 16	823 35	4,548 73
Hawkesbury post office, &c.		292 13	126 35		7 12	425 60
Ingersoll post office, &c		364 95	251 82	354 76	13 85	985 38
Kenora post office, &c		356 65	672 40	187 91	52 08	1,269 04
Kingston custom house		173 55	351 55	104 25	6 80	636 15
" drill hall		450 00				450 00
" examining warehouse			39 90		0 55	40 45
" Inland Revenue office				26 85	15 97	42 82
" military college		2,481 00				2,481 00
" post office		492 85	410 00	308 65	12 13	1,223 63
Lindsay post office, &c		334 90	201 89	48 80	22 50	608 09
London custom house		922 95	1,022 46	457 70	100 65	2,503 76
" drill hall		540 00				540 00
" Engineer's office	291 00					291 00
" post office		1,163 50	638 46	1,811 56	57 50	3,671 02
Napanee post office, &c.		404 20	254 64	114 10	30 19	803 13
Niagara Falls post office, &c.		377 70	236 15	243 75	40 00	897 60
Orangeville post office, &c.		351 20	162 50	1 25	20 00	534 95
Orillia post office, &c.		302 20	217 90	87 47	32 50	640 07
Oshawa post office, &c.		274 48	183 40	88 38	12 91	559 17
Ottawa archives building		700 00	669 50			1,399 50
" astronomical observatory		990 00	552 50	394 94		1,937 44
" bacteriological laboratory			155 63	65 00		220 63
" experimental farm			1,303 23	94 69		1,397 92
" geological survey		700 00	1,029 18	602 60		2,331 78
" Major's Hill park greenhouse		250 00	390 00	15 00		655 00
" national art gallery and fisheries museum		135 00	247 00	28 50		410 50
" post office		1,850 00	1,199 89	692 50		3,742 39
" parliamentary and departmental buildings		31,619 73	20,185 48	14,693 26		66,498 47
" printing bureau		7,330 26	7,970 50	1,605 56		16,906 32
" royal mint			32 50			32 50
" supreme court		1,195 00	643 30	257 00		2,095 30
" workshops (D.P.W.) &c.		1,690 00	955 50	356 00		3,001 50
Ottawa rented buildings :—						
Albert St. (Railway Mail Service offices)		340 00		33 00		373 00
Cliff St. (branch observatory)				12 00		12 00
Metcalfe St. (Labour Dept.)		1,101 25		121 50		1,222 75
" (Militia D.O.C)		250 00		26 98		276 98
" (Surveyor General)		1,500 00	250 00	359 81	189 00	2,298 81
Queen St. (Dominion Analyst)				120 36	27 00	147 36
" (Exhibition Commissioner)		500 00		104 00	60 00	664 00
" ('Imperial' building)		2,100 00	450 00		214 50	2,764 50
" (Railway Commission, &c.)		6,735 00	950 00	409 50	661 53	8,756 03
Rideau St. ('Corry' building)		5,100 00			360 00	5,460 00
Slater St. ('Canadian' building)		34,162 56	500 00	4,181 10	1,142 40	39,986 06
" (Militia building)		14,671 72	1,000 00	5,793 45	1,792 48	23,257 65
Sparks St. (Ahearn & Soper building —Georgian Bay Survey offices)		360 00				360 00
Sparks St ('Seybold' building)		1,625 00				1,625 00
" ('Sparks Chambers')		831 00		18 00		849 00
Sussex St. (French translator's offices)		450 00	108 00	128 98		686 98
" (Geological Museum annex		390 00				390 00
" (marine stores)			178 50			178 50
Wellington St. (Custom-house)		929 58	750 00	303 36	165 00	2,147 94

PART II.—STATEMENT B.—EXPENDITURE—*Continued.*

Name of Building.	Rents.	Salaries of and Supplies for Engineers	Heating.	Lighting.	Water.	Total.
Ontario—Continued	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Ottawa rented buildings—*Con.*						
Wellington St. (Gas Inspector)			3 04	4 02		7 06
" (Mounted Police stores)	855 00		91 00	63 00		1,009 00
" (Langevin block)	5 00					5 00
" ('Orme' building — Department Interior)	25 00					25 00
" (Workshops of D.P.W. —old)	400 00					400 00
Paris post office, &c		349 30	129 95	49 88	52 20	581 33
Pembroke post office, &c		341 37	255 25	99 00	40 00	735 62
Peterboro' custom-house		258 05	235 31	198 35	37 50	729 21
" post office		300 55	255 67	229 39	56 25	841 86
Petrolea post office, &c		353 83	225 04	199 14	29 82	807 83
Picton "		344 82	222 75	98 91	13 50	679 98
Port Arthur "		293 04	212 50	65 60	89 25	660 39
" Engineer's office	87 50		21 50			109 00
Port Colborne Engineer's office	120 00					120 00
" post office		287 78		62 50	12 50	362 28
Port Hope post office, &c		359 86	317 25	282 90	20 43	980 44
Prescott custom house			87 20		45 00	132 20
Prescott post office		348 95	219 50	170 59	45 00	784 04
Sandwich post office			135 98			135 98
Sarnia post office, &c		427 20	323 02	160 27	44 00	954 49
Sault Ste. Marie post office, &c		490 60	38 00	198 80	136 75	864 15
Smith's Falls post office, &c		343 00	170 25	66 24	57 38	636 87
Stratford armoury		208 00				208 00
" post office, &c		573 59	306 80	229 29	51 00	1,160 68
Strathroy post office, &c		364 60	199 22	153 81	19 80	737 43
St. Catharines drill hall		507 30				507 30
" post office, &c	19 70	353 70	399 90	414 38	48 41	1,236 09
St. Thomas post office, &c		344 55	264 00	167 30	10 80	786 65
Toronto Assistant Receiver General and Inland Revenue offices		825 25	287 02	131 47	26 17	1,269 91
" Civil Service Exam. office	35 00					35 00
" custom-house		1,502 25	964 69	271 47	77 01	2,815 42
" drill shed		1,035 00				1,035 00
" Engineer's office	505 00			30 21		535 21
" examining warehouse		3,673 72	1,326 68	295 13	33 85	5,329 38
" gas inspector's office	360 00					360 00
" post office	1,748 34	7,272 24	1,828 34	3,824 12	358 28	15,031 32
" letter carriers' depot	210 00					210 00
" post office Station A		887 58		942 56		1,830 14
" " " H	1,000 00	2 59	27 45	98 66	2 90	1,131 60
" " " B	1,250 00	9 90		609 57		1,869 47
" " " E		45 00				45 00
" " " C		349 00	234 51	419 27	9 97	1,012 75
" " " F			56 10	13 64		69 74
Toronto Junction post office, &c		377 30	141 39	225 29	9 00	752 98
Trenton post office		337 55	185 50	156 25	56 25	735 55
Walkerton post office, &c		336 30	257 23	100 00	15 50	709 03
Windsor drill hall		300 00				300 00
" post office, &c		729 30	503 40	1,207 20	48 00	2,487 90
Wingham post office, &c		41 38	118 10	14 32		173 80
Woodstock post office, &c		411 92	314 26	396 59	35 20	1,157 97
Totals for Ontario (carried to Statement A, page 12)	78,207 65	94,679 85	69,584 53	45,287 76	3,395 74	291,155 53
Manitoba.						
Brandon experimental farm				64 39		64 39
" immigrant building			126 27		5 64	131 91

PART II.—STATEMENT B.—EXPENDITURE—*Continued.*

Name of Building.	Rents.	Salaries of and Supplies for Engineers	Heating.	Lighting.	Water.	Total.
Manitoba—Continued.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brandon post office, &c.		535 65	858 30	499 16	75 00	1,968 11
Dauphin immigrant station			4 75			4 75
Elkhorn immigrant building	90 00					90 00
Minnedosa Dominion Lands office	45 00					45 00
Portage la Prairie post office, &c.		489 10	533 73	216 00	7 55	1,246 38
Virden immigrant building	42 00					42 00
Winnipeg custom-house		341 05	166 95	133 23	84 46	725 69
" Dominion Lands office			100 65	4 80	22 38	127 83
" clerk of works office		62 00		7 85		69 85
" Engineer's office	310 00			11 16		321 16
" examining warehouse		2 00	80 63	53 90	5 29	141 82
" immigration buildings	153 30	55 00	2,616 98	1,412 24	273 82	4,511 34
" new military store		105 00				105 00
" post office	25 00	4,418 57	2,763 33	3,665 99	306 63	11,179 52
" " sorting room at C. P.R. station	843 75					843 75
" weights and measures	350 00					350 00
Totals for Manitoba (carried to Statement A, page 12)	1,859 05	6,008 37	7,251 59	6,068 72	780 77	21,968 50
Northwest Provinces.						
Alameda Dominion lands office	135 00		53 98			188 98
Battleford " " "	255 00		117 50			372 50
" immigration building	120 00		275 25			395 25
Banff topographical survey office	66 00					66 00
Carnduff court house		166 64		2 65		169 29
Calgary court house &c.	90 00	205 47	232 26	248 09		775 82
" custom house	740 00			80 64		820 64
" Engineer's office	114 00			10 56		124 56
" Dominion lands office	37 00					37 00
" homestead inspectors	75 00			12 12		87 12
" immigration building			61 21	33 80	30 00	125 01
" topographical survey office	237 50					237 50
" post office, &c.		697 43	797 28	1,339 02	382 50	3,216 23
" " inspector's office	210 00	75 75		47 52	3 75	337 02
Davidson immigrant building			8 10			8 10
Edmonton court house	420 00	330 00	70 00	62 10		882 10
" Dominion lands and registry office	22 50	417 05	4 00	102 95		546 50
" post office	1,000 00	419 55	163 30	302 00		1,884 85
" immigrant shed	604 87		344 44	8 55		957 86
Indian Head experimental farm			708 75	84 12		792 87
" forestry station			323 75			323 75
Lethbridge court house and custom house, &c.	17 50		129 25	71 85	43 70	262 30
" immigration building			284 87	84 03	20 00	388 90
" post office		477 80	36 38	2 00	19 00	535 18
Medicine Hat court house		270 00		53 76	7 50	331 26
Lloydminster immigration building			246 00			246 00
Macleod custom house			137 80	65 10		202 90
" court house		331 90	162 75	177 50	1 75	673 90
Prince Albert Dominion lands and registry office		333 30	337 50			670 80
" immigrant shed			42 20			42 20
" post office, &c.		483 15	546 02	57 37	30 60	1,117 14
Red Deer Dominion lands office and court house		278 70	125 00	37 55		441 25
Regina clerk of works office	175 00	5 55				180 55
" court house		400 50		93 53		494 03

PART II.—STATEMENT B.—EXPENDITURE—*Continued.*

Name of Building,	Rents.	Salaries of and Supplies for Engineers.	Heating.	Lighting.	Water.	Total.
Northwest Provinces—Concluded.	$ cts.	$ cts.	$ cts.	$ cts	$ cts.	$ cts.
Regina Dominion lands and registry office		845 41	440 00	168 60	30 00	1,484 01
" immigrant building	1 00		230 23	12 35	23 25	266 83
" post office &c		404 84	320 46	134 80	26 25	886 35
Rosthern Dominion lands office	120 00					120 00
" immigrant building			8 00			8 00
Strathcona immigrant building	36 00		163 13			199 13
Saskatoon " "			150 00			150 00
Stettler immigrant building	180 00		7 15			187 15
Moosejaw post office		339 66	853 20	198 10	25 95	1,416 91
" court house		135 07	180 00	9 15	1 55	325 77
" immigrant building			11 25			11 25
Moosomin court house		256 40	7 50			263 90
Wolseley "		196 15		27 50		223 65
Yorkton Dominion lands office	540 00			12 30		552 30
" court house		166 64				166 64
Totals for N.W.T. (carried to Statement A, page 13)	5,196 37	7,236 96	7,578 51	3,539 61	645 80	24,197 25
British Columbia.						
Agassiz experimental farm			68 20			68 20
Atlin post office		126 80	80 00	40 50		247 30
Esquimalt custom house			14 00			14 00
Colwood telegraph repairers office	60 00					60 00
Kamloops post office, &c		556 99	300 46	345 80		1,203 25
Nanaimo post office, &c		524 20	176 50	154 75	9 00	864 45
Nelson post office, &c		524 39	357 90	485 50	72 00	1,439 79
New Westminster post office		598 10	452 03	427 92	39 66	1,517 71
" fisheries, Indian bldg.			10 75	17 04		27 79
Rossland post office, &c		527 49	434 50	370 80	173 00	1,505 79
Vancouver examining warehouse	1,872 00		33 59	209 37		2,114 96
" post office	396 00	1,804 40	93 90	1,520 57	47 03	3,861 90
" dead letter office	184 00					184 00
" steamboat inspector's office	67 50					67 50
" custom house		2 00	113 10	286 60		401 70
" immigrant detention hospital			11 88			11 88
Victoria clerk of works office	84 00	10 00				94 00
" marine and Indian office (old custom-house)		565 55	128 80	55 21	12 00	761 56
" post office		2,699 60	668 50	1,254 18	36 45	4,658 73
" old post office			55 55	9 80	64 35	129 70
" immigrant building			14 00			14 00
William's Head quarantine station			2,948 24			2,948 24
Totals for B.C. (carried to Statement A, page 13)	2,663 50	7,939 52	5,961 90	5,178 04	453 49	22,196 45
Yukon Territory.						
Dawson, sundry buildings (not apportioned)						62,409 06
Whitehorse post office, &c		1,250 00				1,250 00
Totals for Yukon (carried to Statement A, page 14)		1,250 00				63,659 06

PART II, STATEMENT C.—Showing the amounts loaned by Government under the authority of special Acts of Parliament and upon the security of debentures of the borrowing corporation. The works upon which these funds are expended are of a quasi-public nature, and the several advances have been made upon the recommendation of the Honourable the Minister of Public Works, and after inspection by the Chief Engineer.

To whom Loaned.	Parliamentary Authority.	Purpose.	Amount.
Loaned during 1905-6.			$ cts.
*Harbour Commissioner's of Quebec	62-63 Vic., ch. 34, sec. 34.	Improvements to Princess Louise dock.	110,878 67
Loaned during 1906-7.			
Harbour Commissioner's of Quebec	62-63 Vic., ch. 34, sec. 34.	Improvements to Princess Louise dock	120,246 72
			231,125 39

*This information was inadvertently omitted from the report for 1905-6.

PART III

REPORT

ON

PUBLIC BUILDINGS THROUGHOUT THE DOMINION

FOR THE FISCAL PERIOD ENDED MARCH 31, 1907

BY THE

CHIEF ARCHITECT

PUBLIC WORKS, CANADA,
CHIEF ARCHITECT'S OFFICE,
OTTAWA, September 20, 1907.

F. GÉLINAS, Esq.,
Department of Public Works,

SIR,—I am sending you herewith, annual report of works executed under this branch during the fiscal period ended March 31, 1907.

D. EWART,
Chief Architect.

PROVINCE OF NOVA SCOTIA.

ANTIGONISH.

PUBLIC BUILDING.

This building, which was described in my report of last year, is nearly completed.
A hot water heating plant, electric wiring and post office fittings are being installed.
Plans, &c., prepared by this department.
Clerk of works, Alexander McGillivray.
Contractors, the Rhodes, Curry Company.

CANSO.

PUBLIC BUILDING.

This building, which was described in my report for 1906, is now nearing completion.
Plans for a hot water heating apparatus, post office fitting, &c., are prepared.

HALIFAX.

CATTLE QUARANTINE.

Roads were made and wire fencing done under the supervision of C. E. W. Dodwell, resident engineer and superintendent of public buildings, Nova Scotia, Halifax, N.S.
Contractor for fencing, Isaac Hutchings.
Road making by day labour.

CUSTOM-HOUSE.

This building, which was described in a previous report, has been carried on continuously during the fiscal year, and is now practically completed.

Drawings and specifications prepared by this department and work supervised by C. E. W. Dodwell, resident engineer and superintendent of public buildings, Nova Scotia, Halifax, N.S.

W. J. Basche, Resident Architect.

Contractor for building, M. E. Keefe.

Contractor for heating apparatus, Longard Bros.

Contractor for tower clock, Schultz Bros.

DETENTION HOSPITAL.

Trachoma Hospital.

The construction of this building, which was described in my report of last year, has been carried on continuously since and is now nearly completed. Plans, &c., for heating, lighting, fittings and furniture are prepared.

Plans, &c., prepared by this department.

Resident Architect, A. G. Gates.

Contractor for construction of building, lighting, &c., S. A. Marshall & Son.

Contractors for heating apparatus, Martel and Langelier.

DETENTION HOSPITAL (OLD BUILDING).

Repairs were made to carpentry and a cooking range, stove and pipes furnished under the supervision of C. E. W. Dodwell, resident engineer and superintendent of public buildings, Nova Scotia, Halifax, N.S.

DOMINION BUILDING.

A quantity of new furniture, some mail trucks and an electric stove were supplied; the street letter and newspaper boxes were painted, and repairs were effected to lighting, plumbing, carpentry, locks, lock boxes, furniture, glazing and clock.

Work supervised by C. E. W. Dodwell, resident enginer and inspector of public buildings, Halifax, N.S.

CUSTOM APPRAISER'S OFFICE.

This is a rented building. Minor repairs were effected to plumbing, goods hoist, glazing, furniture, &c., under the supervision of C. E. W. Dodwell, resident engineer and superintendent of public buildings, Nova Scotia, Halifax, N.S.

IMMIGRATION BUILDING.

Two new hot water heating furnaces were installed and it is further intended to replace the original two furnaces by two similar to the new furnaces, the four new furnaces to be connected into one battery; extensive repairs were made to the older portion, principally to plastering, plumbing, lamps, &c.

Plans prepared by this department and work carried out under the supervision of C. E. W. Dodwell, resident engineer and inspector of public buildings, Halifax, N.S.

LAWLOR'S ISLAND QUARANTINE STATION.

WINTER HOSPITAL.

This building, which was described in my report for 1906, is nearing completion and is being fitted up with a hot water heating apparatus. The grounds about the building were graded by day labour and some repairs were made to the wharf.

Plans and specification prepared by this department and work supervised by C. E. W. Dodwell, resident engineer and superintendent of public buildings, Nova Scotia, Halifax, N.S.

Clerk of works, Thomas Osborne.

Contractors, Rhodes, Curry & Co.

INVERNESS.

PUBLIC BUILDING.

A site measuring 100 feet by 100 feet situated on the corner of Railway and Second streets was acquired, and on July 28, 1906, a contract was entered into for the construction of the building. The building consists of a main portion having two brick stories resting on a stone basement and crowned by a wooden mansard attic with a frontage of 33 feet on Railway street by a depth of 44 feet, and in the rear a one-story brick adjunct on a stone basement 31 feet in depth by 22 feet in breadth. The main portion is designed to accommodate the heating, fuel and stores in basement, the post office on ground floor, the Customs and Inland Revenue on first floor, and the caretaker on the attic floor. The adjunct is for the examining warehouse and the weights and measures office.

The floors, roofs, partitions and stairways are of wood, excepting the basement floor which is concrete and the partitions of stairway hall which are brick. There are brick vaults one each for ground and first floor.

Plans, &c., prepared by this department.

Clerk of works, Duncan A. McIsaac.

Contractor, Edward F. Munro.

LUNENBURG.

PUBLIC BUILDING.

The foundation walls were cemented; the brickwork of the external walls was repaired and painted; galvaniezd iron drips were built in joints under string course; new concrete front entrance steps were put in; a number of window frames were renewed; the inside and outside woodwork was painted, the floors shellacked, the plastering kalsomined and the glazing put in repair. A new W.C. was fitted up for the post office and another for the customs, a bath tub and a range boiler were fitted up in the caretaker's apartments and some additional electric lights were supplied.

Work done under the supervision of the department.

Contractors, Frank Powers, W. Romkey.

NEW GLASGOW.

PUBLIC BUILDING.

A new hardwood post office lobby screen with post office fittings and furniture were provided; a partition was built inclosing the upper part of the stairway at caretaker's apartments; a new hardwood floor was laid in general delivery and offices, ground floor; a new smoke pipe was provided for heating furnace; the ceilings and walls were kalsomined; additional electric wiring, fixtures and lamps were provided; a new lavatory basin was fitted up and the plumbing generally improved and repairs effected to glazing, woodwork and plastering.

Work done under the supervision of D. H. Waterbury of this department, St. John, N.B.

PICTOU.

CUSTOM-HOUSE.

New hardwood floors were laid in halls and offices of inland revenue suite; the grounds about the building were improved and had cinder footpaths laid through them.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

POST OFFICE.

A concrete footpath was laid along the street frontages; a portion of the rear of lot was shored up and the fence improved; new handrails were supplied to entrance stairs and repairs were made to woodwork of doors, vestibule and floor.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

SYDNEY.

QUARANTINE STATION, POINT EDWARD.

An artesian well was sunk and a well house built over it.

TRURO.

PUBLIC BUILDING.

The post office arrangement was altered and improved; a new lobby screen was erected; a new hardwood floor was laid in post office lobby, general delivery and postal offices; a glass partition with swinging doors was erected in customs hall, first floor; an additional door to close off end of lower hall was put in; some painting and varnishing was done; new entrance stone steps were set and repairs were made to masonry, &c.

Work done under the supervision of D. H. Waterbury, of this department, St. John, N.B.

PROVINCE OF NEW BRUNSWICK.

DALHOUSIE.

PUBLIC BUILDING.

All broken plaster was made good; the walls and ceilings were kalsomined; the wainscot, window frames, sashes, radiators and woodwork painted, lobby screen and hardwood varnished; the sewer was extended; three new water closets were installed; new copper conductors were furnished to eaves and the down pipes repaired; a new cistern was provided in attic; a new stone step was laid at entrance; a broken window sill was replaced; a granolithic footpath was laid and repairs were effected to cement floor of basement, pointing of masonry, and eaves cornice, and some new treads put in main stairway.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

FREDERICTON.

DRILL HALL.

This building, which was described in my report of last year, has been completed, fitted up with hot water heating, electric lighting and furniture. The upper part of the

recreation room which was designed to extend through two floors, has been converted into an additional story, and some minor changes made in partitions incidental thereto.

Plans and specifications prepared by this department.

Clerk of works, H. M. Clarke.

Contractor, C. J. B. Simmons.

PUBLIC BUILDING.

A new lobby screen and fittings, together with some furniture supplied and erected in post office; glass panels were put in entrance doors; an entrance porch was constructed; the general delivery and offices were painted and varnished, and some repairs were made to woodwork.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

KENTVILLE.

PUBLIC BUILDING.

The drains were connected with the town's new sewerage system, the plumbing was improved and some minor general repairs effected.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

MARYSVILLE.

PUBLIC BUILDING.

Partitions were erected to increase the number of rooms on first floor; a pantry was built; the upper story and a part of ground floor were painted and kalsomined; the heating coils were in part rearranged, and repairs were made to woodwork.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

MONCTON.

PUBLIC BUILDING.

A new post office lobby screen was put in; a new hardwood floor was laid in lobby; a new porch was erected at rear entrance; fly doors were provided and some painting and varnishing done.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

ST. JOHN.

CATTLE QUARANTINE.

A sewer pipe was laid from each building to a main, running into Marsh creek, with branches for surface drainage having traps and gratings. Water supply was laid from the city mains with necessary sinks, &c. The grounds were inclosed by wire fencing.

Work done under the supervision of D. H. Waterbury, of this department, St. John, N.B.

CUSTOM-HOUSE.

The long room had an oak glazed and panelled counter screen wth doors, wickets, cashier's cage, &c., erected; gas pipes were extended and new lights supplied; new desks

were provided and the electric wiring extended; the tiling of the main hall floor was in part renewed; the drain was overhauled and put in order; the signal officer's apartments were improved; a new doorway made; furniture and hot water boiler supplied therefor; the floors oiled, the rooms painted and kalsomined and the bath room improved; the marine flag mast was repaired, painted and provided with guys and halyards, the walls of a number of offices were repainted. Repairs were made to steam boilers, electric bells, wires, batteries, clocks, plumbing, closets, cisterns, door springs, cement bases, doors, window sashes and cords, glazing, woodwork, plastering, hydraulic hoist, main external cornice and office furniture.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

ST. JOHN.

POST OFFICE.

New linen blinds were supplied for a number of windows; the post office inspector's rooms had new linoleum floor covering; the basement was painted and whitened; the elevator was overhauled and put in good running order; repairs and improvements were effected to the woodwork generally; some new sections were put in the copper conductor pipes and the remainder as well as the cast iron receivers repaired; some new articles of furniture were supplied and some repaired; a portion of the heating system was removed and replaced by new; galvanized iron ash barrels and disinfectants were supplied; the street letter boxes and parcel receivers were painted, and repairs were effected to plumbing, bells, wires, batteries, speaking tubes, door springs, glazing, masonry, plastering, &c., &c.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

PARTRIDGE ISLAND QUARANTINE STATION.

The buildings hereat comprise a disinfection house, four detention buildings, two hospitals, a gas-house and plant, a quarantine steward's house and a medical superintendent's residence.

The beds in the detention buildings were rearranged and the partitions rearranged enlarging the rooms; the shore landing wharf was repaired; telephone connection with new building was made; the disinfection house and the medical superintendent's were painted and in part papered, varnished, &c., grading about the doctor's house and about the new hospital and to the new roadway was done; an oak medical ease which occupies an end of one of the rooms was constructed in the new hospital, and some stove boards, acetylene street lamps, &c., were supplied.

Work supervised by D. H. Waterbury, of this department, St. John, N.B.

ST. STEPHENS.

PUBLIC BUILDING.

A new post office lobby screen and fittings were supplied under the supervision of D. H. Waterbury, of this department, St. John, N.B.

TRACADIE.

LAZARETTO—LAUNDRY AND SEPTIC TANK.

The laundry is to be an adjunct to the basement and be situated in the rear of the fuel room and measures 52 feet by 29 feet. The floor is to be level with that of the basement of the building and the space is to be divided into a laundry for the

lepers and one for the Sisters of the Congregation, but having no means of communication with one another. The walls are of stone, the partitions brick and the floor concrete. A chimney for the steam boiler is to be built in the rear wall of the main building and have the shaft carried well above the roof. The building will be fitted up with sterilizing and washing apparatus, steam boilers and machinery.

Plans, &c., prepared by this repartment.

PROVINCE OF PRINCE EDWARD ISLAND.

SOURIS.

PUBLIC BUILDING.

This building which was described in my report of last year is completed.
Plans, &c., prepared by this department.
Clerk of works, Bernard Creamer.
Contractor for construction, Edward H. Mitchell.
Contractor for heating apparatus, Bruce Stewart.
Contractor for sidewalks, F. S. Macdonald.

PROVINCE OF QUEBEC.

BERTHIERVILLE.

PUBLIC BUILDING.

Electric lighting was installed; the brick wall between the post office and the annex was removed, and the walls and woodwork of the office and lobby were painted. The gallery in front was refloored.

Work supervised by G. S. Gingras, of this department, Montreal, P.Q.

CHICOUTIMI.

PUBLIC BUILDING.

This building which was described in my report of last year is still in progress of construction. Contracts for hot water heating and wiring are entered into.

Plans and specification prepared by this department.
Clerk of Works, Wm. Warren.
Contractor, Adolphe Beaulieu.
Contractor for hot water heating, Ovide Guay.

COATICOOK.

PUBLIC BUILDING.

The lead piping of the plumbing was removed and replaced by galvanized iron piping; a water closet, a bath and a lavatory basin were fitted up for the caretaker, and the first floor rooms and corridors were ceiled in pine, oil stained and varnished, and had the walls and woodwork painted and the floors cleaned and varnished.

All supervised by G. S. Gingras, of this department, Montreal, P.Q.

DRUMMONDVILLE.

PUBLIC BUILDING.

Some minor repairs were made to plumbing; the interior plastering and woodwork were cleaned and painted, under supervision of G. S. Gingras, of this department, Montreal, P.Q.

DUNDEE.

CUSTOM-HOUSE.

The office of the surveyor was supplied with furniture and with a burglar and fireproof safe, under the supervision of G. S. Gingras, of this department, Montreal, P.Q.

FRASERVILLE.

PUBLIC BUILDING.

A new drain was put in; the stonework was pointed; a new wrought iron boundary fence was put up; a board walk was laid along the footpath; some sodding and tree planting was done; the front entrance platform was renewed; ventilating panes were put in the storm windows of ground floor; new plumbing was fitted up in attic and the plumbing throughout the building renovated; the woodwork throughout was repaired, and general repairs made to the various parts of the building.

Work done under the supervision of this department.

GROSSE ILE.

QUARANTINE STATION.

Sick Division.

Disinfection building.—On November 20, 1906, a contract for the construction of this building was entered into with Achille Dugal. It is to be a one-story building with brick walls, concrete floor and wooden roof, measuring on plan 26 feet by 19 feet. It is to contain a room for infected clothing, steam boiler and sterilizing apparatus, a room for sterilized clothing, a nurses' disrobing room, a needle bath and a nurses' dressing room.

Hospital.—Handrail and railing renewed and painted; wire ceilings put in; a number of water closets fitted up, and a tank of 850 gallons capacity put in.

Hospital employees' building.—Drainage for six W.C.'s was laid, one water closet was fitted up; a stairway was put in and the barn in most part renewed.

Small-pox shed.—The W.C.'s were ceiled with wire mesh; 2 ventilators were put in.

Laundry.—One ventilator was put in.

Friends of the sick division.—The large chimney was demolished; the floor and roof were repaired; a partition was erected, and the cornice was repaired.

Middle Division.

Baker's dwelling.—A cellar was excavated and paved.

Boatmen's original quarters.—These lodgings, six in number, were fitted up with separate sets each of bath, water closets, lavatory basin, hot and cold water service drainage, &c.

Presbytery.—Part of the floor was renewed; two windows were added, and repairs were made to the stable.

Medical superintendent's residence.—The floor of the verandah was in part renovated and painted. The gardener's lodge was raised, furnished with new sills and in part new floor; the wood shed, barn and stable were raised and levelled, and the stairway leading from grounds to river was renewed.

Generally.—Two new wells were sunk and four others were enlarged, cleaned and renovated.

Boatmen's new quarters.—This building, containing eight dwellings, is completed and fitted up with plumbing, hot and cold water services, hydrants, drainage, &c.

Western or Health Division.

New building for inspection of quarantine immigrants.—This building is completed.

First class building.—A steam heating apparatus was put in from plans of Chas. Vezina.

Constables' quarters.—These were repaired, repapered and repainted.

Work supervised by Ph. Beland, clerk of works, Quebec, P.Q.

IBERVILLE.

POST OFFICE.

A site, cadastral No. 203, at the corner of Market and Morley streets, was obtained and on July 26, 1906, a contract was entered into for the construction of the building which has a frontage of 50 feet by a depth of 33 feet. It is a one-story brick building on a stone basement and having a wooden unlighted cock loft roof covered with metal; the floor of the ground floor, the roof and the stairway are wood, and the floor of the basement concrete. There is a brick vault in ground floor. The building is to be heated by hot water.

Plans, &c., prepared by this department.

Clerk of works, J. E. A. Benoit, architect.

Contractor, A. G. Marshall.

JOLIETTE.

PUBLIC BUILDING.

The main entrance to the building was fitted with a permanent porch. Interior window shades were supplied. Minor repairs done to plumbing and a water filter installed in the water main.

All done under the supervision of G. S. Gingras, of this department, Montreal, P.Q.

LEVIS.

PUBLIC BUILDING.

This building which was described in my report of last year has been continuously in progress, but is not yet completed.

A hot water heating system, a tower clock, electric lighting and the fittings for the various departments, have been contracted for and the completion of the building during the incoming summer is expected.

Clerk of works, L. Auger.

Contractor, Joseph Couture.

LONGUEUIL.

POST OFFICE.

This building which was described in a previous report is completed ready for occupation.

Plans, &c., prepared by this department.
Clerk of works, Alfred Prefontaine, architect.
Contractor, Joseph Bourque.
Contractor for clock, T. A. Grothe.
Sodding, W. Baker.

MONTMAGNY.

PUBLIC BUILDING.

This building which was described in a previous report is still in progress. A hot water heating apparatus and electric lighting are being installed.

Plans and specification prepared by this department.
Clerk of works, Theodore T. Beaumont.
Contractor, Napoleon Dumont.
Contractors for heating apparatus, Proulx and Mathurin.
Contractor for electric lighting, Charles Vezina.

MONTREAL.

CUSTOM-HOUSE.

The electric light was installed in the remaining portion of building. Roof and eaves troughs were repaired and several repairs to plumbing, such as two new lavatories, new water pipe, new waste pipe, &c.

The heating apparatus was also repaired; two coils altered, two others put in private detectives rooms and the ceilings of these two rooms repaired and tinted. Hardwood work was repaired and varnished, a number of articles of furniture supplied, also carpets and linoleum and 200 feet of fire hose.

Work supervised by C. Desjardins, clerk of works, Montreal, P.Q.

EXAMINING WAREHOUSE.

Walls were pointed; brick pillars in all corridors on every floor were repaired and covered 4 feet high with steel plates for protection from trucks loaded with goods.

A mechanical stoker was put in for boilers, a room was fitted up for firemen. From time to time, repairs were done to the large down pipe from roof and also to plumbing. Several repairs to heating apparatus and the pipes in basement were covered over with asbestos and two coils renewed.

Work supervised by C. Desjardins, clerk of works, Montreal, P.Q.

INLAND REVENUE BUILDING.

The original heating furnaces were taken out and two new ones installed, this necessitated excavating in order to lower floor and give required space for pipe connection to chimney and other connections, the floor was cemented, water pipe and connections to coils were added, also several valves.

Repairs were effected to plumbing, roof and eave troughs and also to gas pipe and a few Auer lights added.

Work supervised by C. Desjardins, clerk of works, Montreal, P.Q.

MONTREAL.

POST OFFICE.

The following alterations of and additions to money order and Accountant's offices were effected; a wall was demolished, a new glazed partition put in doors and wickets erected; a hardwood counter was placed all along new division with drawers, doors, shelves, necessary locks, &c.; plastered division was made and an opening through another wall for a door to the new room; plumbing in these new offices was altered, 2 new basins and taps, water pipe and sinks were put in and various repairs were made to the whole of the plumbing.

The 3 doors to main entrances with the old porches were taken down and 3 new revolving doors were put in.

A new hot water system consisting of a furnace in basement and a galvanized iron boiler in attic was installed, to supply hot water for the purpose of cleaning building, together with galvanized iron pipes and all necessary connections to serve hot water to each floor.

Various alterations were effected to electric lights, new lights added in new offices of money order and Accountant; also 3 large electric lamps installed outside of three main entrances.

A telephone system was installed from Assistant Postmaster's office, to all branches of the department.

The heating system also has undergone certain repairs; a number of coils were altered and a new one added in Superintendent Ross' room. The mail wagons were repaired and new rubber tires put on.

New hardwood floors were laid in basement, letter carriers' large room, post office Inspector's rooms and the 4 corridors on same floor.

Several tables and pigeon-holes for the distribution of mails were supplied. The roof has also undergone repairs.

POSTAL STATION 'B.'

Repairs were effected to glazed partitions and letter boxes; a new division partition was put up to enlarge letter carrier's room; doors and windows were repaired; new locks put in; walls repaired and whitewashed; all woodwork, inside and out was painted and the hardwood partitions were varnished. Iron grilles were put in all openings in basement, also to windows and doors in rear of letter carrier's office.

W.C.'s were repaired, a complete system of urinals, &c., was installed.

The gas light system was also repaired, gas pipes and several lights added.

Work done under the supervision of C. Desjardins, clerk of works, Montreal, P.Q.

POST OFFICE, ST. LAWRENCE STREET.

Minor repairs to plumbing, to W.C.'s and urinals, also to gas light and a few Auer lights added.

Work done under the supervision of C. Desjardins, clerk of works, Montreal, P.Q.

POST OFFICE, ST. LOUIS DU MILE END.

Minor repairs were done to this building, the framework around tower clock repaired and varnished, also new panes of glass put in. Electric light repaired and a few lights added. A system of gas light installed for the P.O. A few urgent repairs to plumbing, W.C.'s, urinals, &c.

Work done under the supervision of C. Desjardins, clerk of works, Montreal, P.Q.

HOCHELAGA POST OFFICE.

The exterior of all openings, roof, balustrades, iron cornices, &c., were painted, under the supervision of C. Desjardins, clerk of works, Montreal, P.Q.

NICOLET.

PUBLIC BUILDING.

This building, which was described in a previous report, is still in progress.
Plans, specifications, &c., prepared by this department.
Clerk of works, Philemon Rivard.
Contractor, Joseph Bourque.
Contractor for heating apparatus, Jos. Morisette.

NOMININGUE.

IMMIGRATION BUILDING.

A contract for the construction of this building was entered into October 19, 1906, and the building is completed.

It is a 2½-story wooden building on stone foundation walls, and consists of a main portion 46 feet by 28 feet, having on the ground floor separate dining rooms for men and women and on the first floor separate dormitories for men and women, the attic being for storage and there being no basement; also a rear wing 26 feet by 18 feet containing a basement for vegetable storage, a ground floor for caretaker's dining room and a first floor for (2) bedrooms. In a re-entrant angle between the main building and the wing is a one-story open leanto shed 13 feet by 17 feet.

Plans, &c., prepared and work supervised by the department.
Work supervised by G. S. Gingras, of this department, Montreal, P.Q.
Contractor, L. Gauthier, Quebec.

QUEBEC.

CITADEL.

During 1906-7, a wooden one-story shed, the walls and roof covered with metal, measuring on plan 100 feet by 20 feet was constructed in the shot yard under the supervision of Ph. Beland, clerk of works, Quebec, by Decary and Noel, contractors.

Plans and specification prepared by this department.

HIS EXCELLENCY'S RESIDENCE, CITADEL.

Repairs to heating furnace, water service, ventilation and bells were effected; some of the furniture was repaired and revarnished, and the interior of the building cleaned and put in order for the annual visit of Their Excellencies.

Work supervised by Ph. Beland, clerk of works, Quebec, P.Q.

IMMIGRATION BUILDING, LOUISE EMBANKMENT.

Inclosure fences were erected between the buildings and the tracks and between the buildings and the wharf; a number of lavatory basins were placed in the offices and repairs were effected to the roofs and stoves.

A number of signs were painted and some awnings provided.

Work supervised by Ph. Beland, clerk of works, Quebec, P.Q.

POST OFFICE.

An additional observation gallery was erected; a portion of the roof was recovered with metal; a number of offices were repapered and repainted; repairs were made to plumbing and some articles of furniture and some carpet, linoleum, curtains, &c., were supplied.

Work supervised by Ph. Beland, clerk of works, Quebec, P.Q.

QUEBEC.

WEIGHTS AND MEASURES OFFICES.

General repairs to carpentry were effected under the supervision of Ph. Beland, of this department, Quebec, P.Q.

CUSTOM-HOUSE.

Iron ladders were fixed on roof; a number of the offices were papered and painted and the iron railing on wharf was painted; a carpet and a number of articles of furniture were supplied and repairs were made to wharf, heating apparatus and plumbing.

Work supervised by Ph. Beland, clerk of works, Quebec, P.Q.

EXAMINING WAREHOUSE.

Iron ladders were placed on roof; the heating mains of the front portion were renewed and some of the branches altered; the boiler room, ceiling and the covering of the steam boilers were sheeted with steel; the flooring in second floor was renewed in birch; a large counter and wood partition glazed above and panelled below were put in; one room was painted and the plastering was repaired.

Work supervised by Ph. Beland, clerk of works, Quebec, P.Q.

STORE BUILDING, DOMINION ARSENAL.

On May 7, 1907, a contract for the construction of this building was entered into. It is a three-story stone building on stone and cement foundations having frontages of 91 feet and 53 feet on Carleton and Arsenal streets respectively. All the ground floor excepting what is occupied by weigh scales, elevator, brick safe, stairways and storekeepers office is for storage; the first floor has a strip 20 feet in width, and the second floor a strip 15 feet in width, by the length of the building, devoted to offices, and the remainder is for storage. There is a brick safe room on each floor and a lavatory on both first and second floors. The external walls are lined with brick.

The staircases, posts, beams and the floor and ceiling joints are of iron, but the partitions and roof are of wood the partitions being mainly glazed partitions. The elevator travels from top to bottom. The floors and second floor ceiling are concrete, the ground floor covered with block pavement and the office portions of the succeeding floors with hardwood flooring. The roof is covered with tar and gravel composition.

Plans, &c., prepared by this department.

Contractors, Jinchereau and Lamonde.

TRACHOMA HOSPITAL, SAVARD PARK.

A brick building for disinfection was erected, the cesspool was lined with brick; the verandahs of the temporary hospital were covered with iron; the temporary hospital windows were furnished with iron grilles; two ranges were furnished and heating apparatus, baths, electric lights, &c., were put in the temporary building, and also temporary latrines erected outside.

Wooden benches and table were supplied and the roof of the temporary hospital was painted. Some minor works of plumbing and drainage were done, and a water service pipe from the aqueduct was laid to the buildings.

Work supervised by Ph. Beland, clerk of works, Quebec, P.Q.

DETENTION HOSPITAL (TRACHOMA HOSPITAL), SAVARD PARK.

This building, which was described in a previous report, is nearing completion.

Plans, &c., prepared by this department.

Work done under the supervision of E. M. Talbot, architect.

Contractors, Jinchereau and Lamonde.

Contractors for hot water heating apparatus, Martel & Langelier.

RICHMOND.

PUBLIC BUILDING.

The interior was cleaned and painted throughout; hardwood floors were laid in first floor hallway and in caretaker's kitchen and a water filter was fitted to the main feed pipe.

Work done under the supervision of G. S. Gingras, of this department, Montreal, P.Q.

ST. HYACINTHE.

DRILL HALL.

This building, which was described in a previous report, is completed; furnished with hot water heating and electric lighting.

Plans, &c., prepared by this department.

Clerk of works, Francis Renaud.

Contractors, Paquet & Godbout.

Contractor for hot water heating apparatus, Joseph Huette.

Contractor for electric lighting, St. Hyacinthe Gas and Electric Power Company.

Contractors for fittings, Morin & Fils.

ST. JOHNS.

POST OFFICE BUILDING.

This building, which was described in my report of last year, is still in progress.

Plans and specification prepared and work to be supervised by J. E. A. Benoit, architect, St. Johns, P.Q.

Contractor, J. J. Collins.

ST. JEROME.

PUBLIC BUILDING.

The roof of the main building was covered with galvanized iron and a water filter was installed under the supervision of G. S. Gingras, of this department, Montreal, P.Q.

SOREL.

PUBLIC BUILDING.

A new flag pole was erected on tower; the main entrance steps were repaired and covered with special cast iron plates; additions were made to the heating apparatus on ground and attic floors; the lead piping of plumbing on first floor was removed and replaced by galvanized iron piping, and furniture and carpets were supplied to the customs, inland revenue and marine offices.

Work supervised by G. S. Gingras, of this department, Montreal, P.Q.

ST. HYACINTHE.

PUBLIC BUILDING.

The plumbing at the post office, &c., building and that at the inland revenue building underwent repair under the supervision of G. S. Gingras, of this department, Montreal, P.Q.

THETFORD MINES.

PUBLIC BUILDING.

The main roof was recovered with galvanized iron, and repairs were made to a number of the windows and to cornice, all under the supervision of G. S. Gingras, of this department, Montreal, P.Q.

THREE RIVERS.

DRILL SHED.

This building, which was described in my report of last year, is still in course of construction. A hot water heating apparatus and an electric lighting service were put in.

Clerk of works, Emile Tanguay, architect.

Contractors for the erection of the building, Jos. Bourque & Co.

Contractors for heating apparatus, Martel & Langelier.

Contractors for electric lighting service, The Slade Electric Company.

VICTORIAVILLE.

PUBLIC BUILDING.

Snow and ice steel guards were supplied and fitted to eaves of roof on front and south faces of building; a covering was erected over the customs entrance, and hardwood floors were laid in kitchen and in bath room.

Work supervised by G. S. Gingras, of this department, Montreal, P.Q.

PROVINCE OF ONTARIO.

ALEXANDRIA.

PUBLIC BUILDING.

A contract for the reconstruction of this building in accordance with the original plans was entered into May 28, 1906, and the building is now completed.

Plans, &c., prepared by this department.

Clerk of works, J. R. Chisholm.

Contractor for construction of building, W. J. Rowe.

AMHERSTBURG.

PUBLIC BUILDING.

The building was renovated, cleaned, painted, kalsomined and papered, the outside painting including brickwork, eaves troughs and ironwork. All the carpentry and ironwork including the eaves troughs and down pipes were made good. The building is now in good condition.

Work done under the supervision of Thos. H. Hastings of this department, Toronto, Ont.

BARRIE.

PUBLIC BUILDING.

Alterations and rearrangement of the post office fittings were made, a new post office screen with new brass boxes and drawers also a new floor were put in the post office. A bath was fitted up in caretaker's quarters and the plumbing was overhauled and in part renewed. A new partition was erected and the interior painted and kalsomined.

Work supervised by Thos. H. Hastings, of this department, Toronto, Ont.

BERLIN.

PUBLIC BUILDING.

The top of the main chimney was rebuilt under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

BELLEVILLE.

PUBLIC BUILDING.

The post office and money order fittings throughout were altered, rearranged and added to and some repairs were made to painting, kalsomining and plastering. All under the supervision of Thos. H. Hastings, of this department.

BRAMPTON.

PUBLIC BUILDING.

The interior of this building was entirely cleaned and renovated and had new electric wiring and fittings installed as also a new maple floor in lobby.

Work supervised by Thos. H. Hastings, of this department, Toronto, Ont.

BRANTFORD.

PUBLIC BUILDING.

The building was wired throughout for electric lighting. Fire escapes were provided and fixed to the building. A portion of the deck roof was raised; the deck was repaired and recovered with galvanized iron; the plumbing was renovated; new furniture was supplied to the customs and inland revenue offices; new granite entrance steps were built and some window shades provided.

Work supervised by L. H. Taylor, architect.

CHATHAM.

DRILL HALL.

This building which was described in a previous report is completed and fitted up with hot water heating, electric lighting, &c.

PUBLIC BUILDING.

The drain was repaired; the ceilings and walls of post office were painted and the screen cleaned and varnished.

Work supervised by Thos. H. Hastings, of this department, Toronto, Ont.

CLINTON.

PUBLIC BUILDING.

The porch was closed with a glass screen under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

FORT WILLIAM.

PUBLIC BUILDING.

An inclosure fence was erected and a number of articles of furniture was supplied the inland revenues offices together with some linoleum; all under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

GUELPH.

ARMOURY.

This building, which was described in my report for last year, is yet under construction. Plans for hot water heating and electric lighting services are prepared.

Plans, &c., prepared by this department.

Clerk of works, W. A. Mahoney.

Contractors, Nagle and Mills.

GODERICH.

PUBLIC BUILDING.

Alterations and rearrangement of the public lobby screen were made under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

HAMILTON.

NEW DRILL SHED.

The original Hamilton drill shed to which this building is to be attached, was described in the report of this department for the fiscal year 1886-7.

A contract was entered into for the construction of this building on July 31, 1906, and the works are in progress. The building is situated on Hughson street, south of and 80 feet distant from the original building with which it is to be connected by an extension of the two-story portion of the frontage of the new building. The new building, exclusive of the connecting portion, has a frontage of 167 feet by a depth of 300 feet and consists of a main hall 128 feet wide by 236 feet long, having on the northern side and both ends a two-story and basement portion 33 feet in breadth along rear of drill hall. The drill hall has driveway arched opening to it from front and rear, and there is one arched driveway entrance to yard between the halls through that portion of the building which connects the old and new halls. There is a basement extending throughout the two-story portions; that at the rear of the drill hall contains lavatories and storerooms; along side of the drill hall are bowling alleys and shooting galleries,

and on the street front are kitchens, lavatories, bathrooms, water closets and store-rooms. On the ground floor are 17 armouries, 2 maxim gun rooms, 2 C.O. rooms, 2 Q.M. stores, 2 adjutant's rooms, 2 orderly rooms, 2 map store rooms, 2 signal corps rooms, 2 stretcher' corps rooms and a residence consisting of 6 rooms and a kitchen. On the first floor are 2 officers' mess rooms, 2 officers' billiard rooms, 2 sergeants' mess rooms, 3 band rooms, 2 reading rooms, 1 lecture room, 1 men's recreation and lavatory and W.C. rooms. In the loft of each tower is a room, two for bugle band rooms and two unappropriated.

The walls are of brick with stone dressings, and on stone basement and foundation walls.

Plans, &c., prepared and work supervised by W. W. Stewart.

Contractor, George F. Webb.

ALTERATIONS OF POST OFFICE.

On December 4, 1906, a contract was entered into for extensive alterations of and additions to the post office fittings together with other and incidental works therewith. These include the renewal of the rear stairway, the construction of a number of partitions, the forming of a mail bag room with a storeroom having a stairway thereto over; the opening of a new entrance to the mail bag room from yard; tiling the public lobby; putting a new skylight in the one-story portion; a new room with stairs thereto over vault, and sundry minor works.

Plans, &c., prepared by this department and work supervised by W. W. Stewart, architect, Hamilton, Ont.

INGERSOLL.

PUBLIC BUILDING.

A new entrance porch was erected and a new lavatory fitted up in the post office; all under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

KINGSTON.

ARTILLERY PARK BARRACKS.

Men's Quarters—Alterations and Additions.

This building is being fitted up with a hot water heating apparatus, plumbing, &c., together with new stairways, stone porch, metal roof covering, gutters and down pipes, stone chimney shaft, fireplaces, &c. A basement was excavated under 40 feet of the middle of the building, and the walls carried down the required depth, forming a furnace room, fuel room and store room, and ducts for the heating pipes were formed in concrete along the outer walls. A wooden shed to store the kitchen coal was built at one end of the building constructed of wood on a concrete foundation. Some brick partitions were built in basement and various doorways were built up and some broken out and new jambs built in brick.

Plans, &c., prepared by this department and work supervised by H. B. Smith, architect, Kingston, Ont.

CUSTOM-HOUSE.

A new water closet was fitted up in basement in place of one broken and a new electric light switch was installed.

Repairs were made to lawn pipes, water pipes, glazing, heating apparatus, &c.

All under the supervision of Arthur Ellis, architect, Kingston, Ont.

KINGSTON.

POST OFFICE.

The original letter sorting racks and bunks were taken out and replaced by new; a letter stamping machine was fitted up; the flooring of vestibule of clerk's room was renewed; a plank walk was laid from Wellington street entrance to clerks entrance; a new mail sleigh was provided; the streets boxes for letters and parcels were painted, and repairs were made to yard gates, furnace doors, water and heating pipes, carpentry, locks, glazing, lighting, &c., &c.

All done under the supervision of Arthur Ellis, architect, Kingston, Ont.

LONDON.

MILITARY STORE BUILDING.

This building which was described in my report of last year is now completed and fitted up with a hot water heating apparatus and electric lighting. Tenders are about to be invited for an electrical freight elevator.

Plans, &c., prepared by this department.

Clerk of works, Wm. Joanes, architect.

Contractor, R. G. Wilson.

Contractor for heating, Smith Bros & Co.

Contractor for wiring, The Rogers Electric Co.

POST OFFICE ALTERATIONS AND ADDITIONS.

The works described in my report of last year were completed within that fiscal year and a contract was entered into April 2, 1906, for the post office fittings which are now completed.

Plans prepared and work supervised by H. C. McBride, architect.

Contractor, Wm. Tytler.

NIAGARA FALLS.

PUBLIC BUILDING.

The stonework was repaired and pointed; a new cement platform and new stone steps were put in main entrance; the drains were overhauled; the rain water conductors were overhauled; a new handrail was put up at main post office entrance; the woodwork was painted or oiled and varnished; some kalsomining was done and repairs were done to carpentry and plastering.

Work supervised by Thos. H. Hastings, of this department, Toronto, Ont.

NORTH BAY,

PUBLIC BUILDING.

A contract was entered into on July 30, 1906, for the construction of this building on a site at the intersection of Main and Fraser streets having respective frontages of 66 feet and 132 feet. The building has a frontage of 55 feet on Main street by a depth of 89 feet and is two stories of brick with stone dressings and on a stone basement.

The roof cornice, balustrade and pediment are galvanized iron, the quoins on the street fronts, the pilasters, window and door jambs, lintels, sills, &c., of doors and windows on Main street as also the lintels, keystones and sills of the openings of the remaining portions of the building are of cut stone.

The basement is for storage, heating apparatus and fuel; the ground floor for the post office, examining warehouse and weights and measures office, and the first floor for the customs, inland revenue and militia. The floors, roof and stairway, excepting the floors of basement and lavatories which are concrete, are of wood. There is a brick vault on ground floor and one on first floor.

Plans, &c., prepared by this department.

Clerk of works, W. A. Martin.

Contractors, McGillivray and Labelle.

ORANGEVILLE.

PUBLIC BUILDING.

A new post office box and drawer screen and a new maple floor were put in; the building was painted inside, and out and a new fence was constructed.

Work supervised by Thos. H. Hastings, of this dpartment, Toronto, Ont.

ORILLIA.

PUBLIC BUILDING.

New post office fittings and furniture, a new maple floor in post office and a new lavatory were put in, the electric wiring was repaired and a number of awnings supplied to the customs offices.

Work supervised by Thos. H. Hastings, of this department, Toronto, Ont.

OSHAWA.

PUBLIC BUILDING.

Repairs were made to drains and a new lavatory fitted up under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

OTTAWA.

DOMINION ARCHIVES BUILDING.

This building has been fitted up with an elevator in addition to what I have previously reported and is occupied.

BIOLOGICAL LABORATORY.

A water and gas service was laid from the building to the stables.

Alterations of and additions to the hot water heating apparatus and plumbing were effected and a system of electric bells hung.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

DOMINION OBSERVATORY.

A three-inch overflow was put in the water supply tank, and an electrical centrifugal pump was installed to raise water to this tank. An electrical fan was fitted up in the photographers room.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

OTTAWA.

CANADIAN BUILDING, SLATER STREET.

This is a rented building.

Four new wash basins were supplied and connected, the closets were overhauled, twenty new electric lights were installed, electric bell connections were hung and some minor repairs effected.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

CITY POST OFFICE.

The heating, plumbing and lighting services were completed and a tower clock with one dial facing the east is about to be set up in the attic.

The street letter and newspaper boxes were repainted one coat.

Work done under the superintendence of this department and in most part by the departmental staff of artisans.

Clerk of works, S. Adams.

CUSTOM-HOUSE—NO. 98 WELLINGTON STREET.

This is a rented building which was formerly occupied by the statistical branch of the customs department. To fit it for a custom-house a new stairs was erected and the interior completely renovated, the woodwork painted, the plastering tinted, a number of partitions altered in position. The heating apparatus was repaired and added to.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

EASTERN BLOCK.

Seven rooms were cleaned, painted and tinted for the Finance Department, two for the Privy Council, three for the Justice and one for the Secretary of State; three hardwood floors were laid, two for the Finance Department and one for the Privy Council; sixteen new windows were put in, eight for the Auditor General, four for the Justice and two each for the Privy Council and Secretary of State. Of articles of furniture there were supplied twenty-six cupboards, eighteen of which were for the Auditor General's Department, four for the Secretary of State, three for the Finance and one for the Privy Council; nineteen tables of which eleven were for the Auditor General, five for the Secretary of State and four for the Finance; three chairs for the Privy Council; three firescreens, two for the Auditor General's Department and one for the Secretary of State; a hardwood chest for the Secretary of State and a desk for the Finance.

Four rods and curtains, two coat and hat strips, two desk lamps, one grate back, one steam coil, one electric bell and two drop lights were furnished the Finance Department; seven desk lamps were supplied the Auditor General's Department and two gas grates and as many electric lamps to the Privy Council.

Seven doors were recovered with baize, five for the Justice Department and two for the Privy Council.

Fifty-five articles of furniture were repaired and renovated, twenty-seven for the Auditor General's department, eleven for the Justice, ten for the Finance and seven for the Secretary of State. Two pigeon hole cases and one window deflector were supplied to the Secretary of State. Fifty-five lights of glass were furnished and glazed. A water service filter was installed.

There were minor jobs such as lettering, painting, general repairs, &c. The double windows and summer blinds were taken off, stored, cleaned and put on periodically, and the roofs, footpaths and roads were kept free from snow during winter.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

GEOLOGICAL MUSEUM, SUSSEX STREET.

There were supplied and connected, one hot water heating coil, two hot water heating radiators, thirty-three drop lights, eight desk lamps, fifteen Auer light mantles and two wooden lead lined sinks. In the Johnston annex two rooms were fitted up for photographic purposes. The roof was thoroughly repaired throughout.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

GOVERNMENT HOUSE.

The addition referred to in last year's report is completed. Two marble mantels were removed from the dining room and two carved wood mantels substituted. Three carved wood mantels were set in the new wing, one in H.E.'s office, one in the sitting room and one in the adjoining bedroom.

A boiler house and coal pit, 8 feet in depth, with concrete walls and a brick chimney was built under potting shed of small greenhouse and a wooden shed was built over coal pit. A hot water heating apparatus was fitted up in this pit.

A new conservatory on a line with and abutting the new wing was begun and completed during the fiscal year. The basement is of concrete and the superstructure iron and glass. It consists of a middle portion, 80 feet by 50 feet, and two wings on opposite sides, 100 feet long by 35 feet broad, the long axis of the middle portion, which has demi duodecagon ends, being at right angles to the long axes of the wings. There is a basement, 9 feet from floor to ceiling, under the middle portion, which is 36 feet in height from floor to ridge; the wings being 15 feet from floor to ridge. A doorway was made between the house and the greenhouse. The heating is by steam. Tile drains are laid about the outer walls inside to take the waste water from roofs; concrete division walls 5 feet high divide each wing into two sections, and the stone curbs of plant beds as well as the brick paths are carried on concrete foundations. There is a very extensive system of water supply. Stone curbs about pits have cedar copings carrying iron frames for fixing wires for tying purposes and concrete curbs are run about all beds where they border on paths. Plant tables, propogating tables, &c., are of iron construction, carrying concrete slabs to form table bottoms.

A section 6 feet in length was taken from the end of the potting shed and an addition was built at the east side of the potting shed to make up the room lost. The wood floor of potting shed was removed and a concrete floor substituted, after which it was fitted with potting tables, soil bins, shelves and racks for pots, cupboards for glass vases, &c., a sink, a W.C. and a complete water service which service was extended to the small greenhouse and the hot beds. Four potting boxes were made for palms to replace others damaged and useless.

The terrace on grounds was graded up and continued around new office wing and sodded and a concrete catch basin put on upper level of terrace.

The coal bin under studio was enlarged. A new dais was built at end of ball room. Of painting and glazing to house, cottage, greenhouses, stables, outbuildings, fences, &c., there were 5,437 yards painting 2 or 3 coat work; 1,035 yards tinting of walls and ceilings; 320 yards shellacking and varnishing floors; 125 yards enamelling furniture, &c.; 83 rolls paper hung; 16,822 feet super glazing and 35 days of a painter varnishing, lettering, patching, &c. A coal bin was built in shed at stables; the loft

of stable was floored to make storage room; 10 pairs of sashes were made and fitted in stables to replace those worn out and numerous minor repairs were made in stables, harness room, men's rooms and about outbuildings generally. Alterations of the stage in ball room were made by moving the proscenium forward and adding 4 feet to the breadth of the stage; a stepped staging with temporary flooring was provided in the auditorium to afford a better view of stage; new scenery and a drop curtain were painted and electric footlights and headlights were substituted for those of gas. A number of changes were made in the lighting of rooms; electric wiring was run from house to log cabin and drop lights put in to replace oil lamps. Sink in housemaids pantry was relined; a new cooking stove was supplied coachman's house; two coal stoves and one wood stove were supplied stables, rink, &c. Of household furniture there were supplied to the house, 1 billiard table with cues, &c., 4 chairs, 3 tables, 5 screens 2 chests, 1 stool, 2 pairs handirons and 2 brass candlesticks and supplied to the cottage 15 chairs, 1 wardrobe and 2 tables. A large number of chairs, sofas and screens were recovered; 28 dining room chairs were repaired and reupholstered in leather and repairs were made to tables, chairs, bedsteads, &c. At the Hall there were supplied, 2 large hand tufted rugs, 294¾ yards of Wilton carpet, 58 yards cocoa matting, 3 cocoa mats and 3 small rugs; at the cottage there were supplied 27 yards Brussels carpet, 46 yards Wilton carpet, 1 Brussels rug, 4 pairs taffeta curtains, 6 cushions and 1 pillow. Of curtains there were supplied the house 7 holland blinds, 30 pairs swiss curtains, 7 pairs velour curtains and 6 pairs tambour curtains. Of electric lights there were 1-6 light, 8-3 light pendants and 2-1 light pendant supplied to the house. Changes in position of electric bells, coils and radiators were made to suit occupants of rooms and a number of them repaired. There were also supplied, 48 table cloths, 40 dozen napkins, 6 dozen towels, 167 articles of glassware, 33 articles of stoneware, 230 articles of china, 74 pieces of bedroom ware, 61 kitchen utensils, 6 cupboards, 2 wardrobes, 2 sets of open book shelves, 5 cases with glass fronts and 36 hot bed and melon frames and sashes. A doorway was broken through wall on first floor of laundry and a frame and glazed door hung.

The boat houses were made good and the float enlarged. The path around cliff leading to boat houses was repaired. The skating rink was enlarged on the north side 12 feet by 165 feet, necessitating rock excavation and earth levelling up. Two hundred and fifty-five lineal feet of close board fence, 6 feet high, with two pairs of gates were constructed and the fences generally were repaired. The sidewalks and crossings were repaired using 5,100 feet lineal of 2-inch and 3-inch plank and 235 lineal feet of cedars.

The conservatories were kept in order, the lawns, drives, &c., rolled and otherwise tended. The ice-house was stored with ice. The roofs, paths, slides, rinks, &c., were cleared of snow by the departmental staff, by whom the grounds, lawns, gardens and plant-houses were maintained.

The usual periodic cleaning, packing and unpacking were done; arrangements for and attendance on entertainments were furnished, and the rinks, slides, &c., kept in order.

Work done under the supervision of Wm. Hutchison, superintendent.

PARLIAMENT GROUNDS.

The government dump at the northern end of Bank street was enlarged and improved. The main sewer from the western block was overhauled and repaired: the lower end removed and relaid in reinforced concrete pipe. The iron flag masts on the Parliament buildings terrace were removed and replaced by wooden masts. Alterations were made in the gas mains and repairs to the walks.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

OTTAWA.

IMPERIAL BUILDING.

This is a rented building on the south side of Queen street near O'Connor street.

The offices therein were vacated by the immigration branch of the Interior department and occupied by the Stationery branch of the same department, necessitating the putting in of a large quantity of shelving and the execution of various alterations.

Connections were made for a gas stove and a large amount of drilling, cutting and making good were done in walls, cement floors, &c., for the placing of wires, pipes, &c.

LABOUR DEPARTMENT.

This is a suite of rented offices, situated on Metcalfe street, opposite the Langevin block.

Three pine chests and nine lights were supplied and repairs were made to doors, windows and furniture.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

LANGEVIN BLOCK.

The terra cotta partitions at the eastern end of the attic were removed and wooden glazed partitions substituted. Of rooms cleaned, tinted and painted, 9 were for the Agriculture, 16 for the Post Office and 21 for the Interior and Indian Affairs. Thirty-five signs were lettered for the Agriculture, thirty-one for the Interior and Indian Affairs, and six for the Post Office; twenty-six articles of furniture were painted, shellacked or varnished for the Agriculture, forty-four for the Interior and Indian Affairs and forty-three for the Post Office; fourteen cupboards were supplied to the Agriculture department, twelve to the Interior and Indian Affairs and three to the Post Office; two bookcases were supplied to the Agriculture department and two to the Post Office; nine window screens were supplied to the Agriculture department; two map cases were supplied to the Argiculture department and four to the Indian Affairs; ten brass rods with curtains were supplied to the Argiculture department, fourteen to the Interior and Indian Affairs and five to the Post Office; two fire screens and fifteen desk lamps were supplied to the Agriculture department; eight dozen hat and coat hooks on wood cleats were supplied to the Agriculture department; thirty coat and hat strips with hooks were supplied the Interior and Indian Affairs, and 54 boards with 230 coat and hat hooks to the Post Office; 500 lineal feet of picture moulding was supplied the Agriculture department and 75 feet to the Post Office; two desks were supplied to the Agriculture department, three to the Indian Affairs and Interior; twenty-four tables were supplied to the Agriculture department, forty-one to the Indian Affairs and Interior and nineteen to the Post Office; a cabinet was supplied to the Agriculture department; twenty-four chairs, 8 stools and two sofas were supplied to the Post Office department, twelve chairs and one sofa to the Agriculture department; twenty chairs and seventeen chair cushions to the Indian Affairs and Interior; twenty-one cases and boxes were supplied the Agriculture department; six step ladders were supplied to the Indian Affairs and Interior and seven to the Post Office department; four plan cases and two hardwood chests were supplied to the Indian Affairs and Interior; six sinks, fourteen switches, four desk lamps, fifteen lamps of other sorts and twelve panel boards were supplied to the Department of Indian Affairs; a considerable quantity of shelving was fitted up and a large number of articles of furniture repaired. General repairs were effected to carpentry, plastering, cement, joinery, painting and glazing.

Work done under the supervision of the department.

Superintendent, John Shearer, jr.

OTTAWA.

BRANCH OF ROYAL MINT.

This building is being fitted up with heating apparatus, steam heating in the workshops and hot water heating in the administration portion. The workshops are now ready to receive the machinery and fittings.

Plans, &c., prepared by this department.

Clerk of works, Geo. Stockand.

Contractors, Sullivan and Langdon.

PARLIAMENT BUILDINGS.

In the Senate, five rooms were renovated, fifteen door signs lettered, 21 lights glazed, two hundred numbers written, a hardwood floor with parquetry border laid in Speaker's apartments, the Speaker's apartments renovated and the ceiling lights of the Chambers changed from 10 c.p. lamps to No. 2 Glower-Nernst lamps. Three cupboards, three desks, three tables, two door frames and ten coat and hat strips, a new gas stove, two sinks and a number of gas lighting fixtures were supplied. Rubber pads were fixed on the treads of the Senate stairway.

In the House of Commons 19 rooms were cleaned, tinted and painted, 24 signs lettered, 400 numbers were stencilled on cases, the library floor was oiled and shellacked. 3,500 feet of lumber was used for shelving in library, 134 lights of glass were supplied, 4 coils were bronzed, 30 pieces of furniture were furnished, 90 chairs were revarnished and 275 hooks on cleats were placed for hanging paper files. There were supplied 4 benches, 156 chairs, 6 desks, 5 cupboards, 5 tables, 7 pigeon hole cases, 2 chests, 3 sashes, 3 step ladders, 2 cushions, an electric heater, a gas cooking stove, a sink, an electric heater, a call bell, 3 desk lamps, 2 bracket lights and 3 drop lights. The electric lights above the Chamber ceiling were changed from arc to Glower-Nernst (240-2) lamps. The ventilation system is still in progress of construction and is expected to be completed during the next fiscal year.

There were 11,632 visitors registered as having ascended the Parliament Tower during the nine months.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

PARLIAMENT BUILDINGS, ADDITION, ETC.

This work comprises an addition extending from the northwestern tower of the western wing northward until it intersects a similar addition extending westward from the northwestern angle of the residence of the Speaker of the House of Commons; together with various works of alteration of and addition to the adjoining portions of the original building. At the angle of intersection is to be a new tower, similar in all respects to the northwestern tower of the west wing, and an additional story, cornice and roof similar in all respects to those of the same tower are to replace the roof of the Speaker's tower which is to be removed. The curtain walls between the original building and the new angle tower are to be similar in detail throughout to the west face of the west wing excepting that there is to be a full attic story with stone exterior walls instead of the mansard attic of the west wing; further, the mansard attic of the west face of the west wing is to be removed and the stone exterior wall be continued up to the coping of the angle towers and form a full attic story instead of the original mansard attic. The walling and construction generally as well as the details of stonework, carving, &c., are replicas of the original work, excepting that the roof is of iron and cement instead of wood and in some minor features variations rather than changes have been made. There will be a new iron stairway with slate treads, inclosing an elevator which will have a travel from basement to attic and be situated in the northwestern angle of the west wing.

The floors are to be of iron, terra cotta and cement covered with wood in the rooms and with marble mosaic in the passages. The tower roofs are to be covered with copper and the remaining roofs with tar and gravel. The slating of the western wing tower roofs and that of the roofs between them is to be removed and replaced by copper.

Plans, &c., prepared by this department.

Clerk of works, S. Adams.

PRINTING BUREAU.

The twelve-inch tile drain was taken out and replaced by one of cast-iron pipe; three offices and two of the large printing rooms were floored in hardwood; 71 lights were glazed; two oak switch cabinets, two cushions and one hardwood box were furnished; a new door was made; a room formed with partition and ceiling inclosing the engine room and the elevator shaft was extended.

Work done under the superintendence of this department.

Superintendent, John Shearer, jr.

RAILWAY COMMISSION—CORRY BUILDING.

This is a rented building.

Six rooms were tinted and painted, seven signs were made and lettered, 4 lights were glazed, an electric call bell system was hung throughout the building, a glass partition was taken down, changed in position and re-erected. There were supplied, two bookcases, two cupboards, six packing boxes, 1 step ladder, 1 window deflector, 1 ventilator and 1 lavatory basin. Twelve chairs were repaired and the position of a number of steam coils changed.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

REPAIRING STREETS, ETC.

Scraping, cleaning and general repairs were done to the various roadways, footpaths and streets under the control of the department. Rubbish, scrapings and ashes were removed from the east block, west block, Langevin block, Parliament building, the workshops, printing bureau, the museum, the archives building, the several rented buildings and the various streets, and deposited at Nepean point; the grass at printing bureau, about Cartier square, Wellington street, two bridges, survey office, fisheries museum and Geological museum was kept clipped, manure was drawn on and removed therefrom,and the ashes removed from the boiler houses and furnace rooms of the various buildings; the roadways, sidewalks, footpaths, roofs and yards were kept clean of snow during the winter.

Work done by the departmental staff.

SUPREME AND EXCHEQUER COURTS.

Two rooms were renovated; the lavatories on the ground and first floors were renovated, refloored in tile on concrete, the plaster removed and replaced by plaster on metallic lath and the closet and lavatory basins, urinals and plumbing as well as the heating removed and replaced by new. The library was relighted, had 6 desk lamps and 20 lamp guards, 1 table, 4 stepladders and 90 feet of shelving supplied, as well as 21 chairs repaired.

Work done by the departmental staff under the supervision of John Shearer, jr., superintendent.

Library Extension.

A contract for the construction of this extension was entered into October 17, 1906. It is one story in height situated on the eastern side of the present library and mea-

sures 38 by 66 feet 6 inches outside; there is also a small extension from the Registrar's room and the conference room over, as well as a circular stairway leading from the library to the conference room. The window openings of the eastern side of the original library are ultilized in making the openings between the library and the extension; the dividing piers as well as the walling from lower side of lintel to ceiling and upper side of sill to floor are removed, the stonewall above being supported on steel beams. The walling and openings are similar to those in the existing work.

Plans, &c., prepared by this department.

Clerk of works, D. J. Mullarkey.

Contractor, Doran and Devlin.

VICTORIA MEMORIAL MUSEUM.

This work, which was described in my report of last year, was continuously under construction during the summer and autumn of 1906.

Plans and specifications prepared by this department.

Clerk of works, P. Canty.

Contractor, George Goodwin.

WESTERN BLOCK.

A portion of the facing of the basement wall at the eastern side was taken down and rebuilt.

Twenty-eight rooms were cleaned, tinted and painted, twelve being for the Public Works department, seven for the Inland Revenue, four each for the Railways and Canals and Marine and Fisheries and one for the Customs; hardwood floors were laid in eight rooms, three each for the Marine and Fisheries and Public Works and two for the Trade and Commerce; one hundred and twenty-six signs were lettered, eighty-seven being for the Customs, eighteen for the Trade and Commerce, fourteen for the Public Works, three for the Railways and Canals and two for the Marine and Fisheries; five hundred and twenty lights were glazed, one hundred and forty-four for the Public Works, one hundred and three for the Customs, forty-three for the Railways and Canals, twenty-eight for the Inland Revenue and two for the Trade and Commerce; one hundred and thirty-five articles of furniture were renovated, one hundred and twelve for the Public Works, eleven for the Inland Revenue, seven for the Railways and Canals and five for the Customs; repairs were made to 125 articles of furniture, one hundred and thirteen of which were for the Public Works and the remainder for the Railways and Canals; forty-two coat and hat strips were supplied, eighteen to the Public Works, twelve to the Trade and Commerce and six each to the Railways and Canals and Marine and Fisheries; sixteen brass rods with curtains were supplied, four to the Public Works, three each to the Mounted Police and Marine and Fisheries and two each to the Customs and Inland Revenue; thirty-four cupboards were supplied, twenty-four to the Public Works, four to the Customs and three each to the Inland Revenue and the Marine and Fisheries; twenty-eight tables were supplied, eleven to the Marine and Fisheries, eight to the Railways and Canals, six to the Customs and three to the Inland Revenue; two hundred and fifteen packing boxes were supplied, one hundred and ninety-five to the Public Works, fifteen to the Customs, three to the Trade and Commerce and two to the Railways and Canals; ten stepladders were supplied, six to the Public Works and four to the Railways and Canals; thirty-four boxes were supplied, twenty-four to the Public Works and ten to the Marine and Fisheries; two cloth doors each were supplied to the Public Works and Railways and Canals; eleven window deflectors were supplied to the Marine and Fisheries and two to the Customs; twenty-four desk lamps were supplied, fifteen to the Railways and Canals, four to the Marine and Fisheries, three to the Customs and two to the Inland Revenue; one hundred and thirty-two drop lights were supplied and

connected, one hundred and eight to the Customs and the remainder to the Railways and Canals; two telephone boxes were provided for the Customs department and one for the Marine and Fisheries, and there were sixteen chair cushions supplied, twelve for the Public Works and four for the Railways and Canals. For the Public Works department there were also provided six stools, one counter, three skylight sash, three new windows, five oak cabinets, nine plan cases, twenty-one drawing boards, forty-five feet of shelving and two window ventilators and there were repairs to 10 chair cushions. For the Customs there were supplied three wood panels, three steam and two electric radiators and three lettered bell blocks. For the Marine and Fisheries there were supplied two map racks, nine chairs, one lavatory basin, two chair cases, four models for fish culture, one electric fan, one gas stove and six new windows and frames. For the Inland Revenue were provided 78 feet of glass partition, one sink, three chair cushions and 60 feet of picture moulding. For the Railways and Canals were provided one glass partition, two newspaper files, eight picture frames and three electric bell services. For the Mounted Police department there were furnished one electric desk fan and one 4 light electroliers, and for the Trade and Commerce one electric bell service. For Mr. Lacas' photographic printing room there were supplied twenty-four special electric lamps for printing machine, two sprayers, one enamelled sink and all necessary pipes, valves, &c.

A large number of lights of glass was renewed.

There were also a large number of repairs to furniture as also minor jobs of painting, lettering and of joinery. The roofs, roads and footpaths were kept free from snow. The winter sashes and summer blinds were cleaned, put on, taken off and stored periodically.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

WOODS BUILDING (66 QUEEN STREET).

This is a rented building.

The ground floor previously occupied by the Ottawa Customs was refitted throughout for the use of the Railway Commission.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

WOODS BUILDING, SLATER STREET—DEPARTMENT OF MILITIA.

This is a rented building. Fifty signs were lettered, forty-two lights glazed, one room cleaned and tinted, a brick partition was removed, the call bells and telephones were in part readjusted owing to occupation of the seventh floor, and a large quantity of making good, cement, plaster, wood finish and painting were done. There were supplied two book cases, twelve chairs, nineteen cupboards, ten brass rods and curtains, two letter boxes, a telephone cabinet, ten picture frames, seventeen tables, one counter, one desk, one indicator case, six chair cushions, one blue print bath, ten bookcase doors, sixteen hat and coat strips, fifty feet of shelving, thirty-nine drop lights, one lavatory basin, four goose neck lamps, four desk lamps, four shades, twelve push buttons, one annunciator, three blocks, two electric bells as well as rosettes, hangers, wire, &c., &c.

Work done under the supervision of this department.

Superintendent, John Shearer, jr.

OTTAWA.

BUILDINGS AND GROUNDS GENERALLY.

In addition to the works mentioned in the foregoing, there are innumerable smaller works, *i.e.*, there are items of repair done by the roofers, the masons, plumbers and other trades; items taking each a number of days' work of a tradesman, besides material to

accomplish. Besides all these, in connection with the various other buildings, the property of the government, there are similar works of repair, painting, furnishing, tinting, &c., in connection with a number of rented buildings: also such works as repairs to and renewals of coal and other sheds, as well as works of a general character, such as the erection and taking down and storing of porches, winter boarding outside steps, &c., &c., all of which are done by the departmental staff.

PETROLEA.

PUBLIC BUILDING.

The interior was painted and kalsomined, a new hardwood floor was laid in post office, a new concrete floor in lobby and some repairs were made to furniture, all under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

PORT ARTHUR.

PUBLIC BUILDING.

An asphalt block pavement was laid on Arthur street from South Water street to Court street, and a 6 foot concrete sidewalk on the east side of Court street from Arthur to Van Norman street.

The interior and exterior woodwork was painted and the interior walls and ceilings tinted, the electric lighting was added to and the plumbing overhauled. In the customs suite, on first floor, a partition between two rooms was removed, two doorways were opened in a partition and the long room counter was lengthened. A door and frame was put in the bath room partition. The lighting service was rewired and a number of fixtures supplied. Alterations of the plumbing were effected.

Work supervised by Thos. H. Hastings, of this department, Toronto, Ont.

PORT COLBORNE.

PUBLIC BUILDING.

The building was painted externally, a bath room with bath and other plumbing was put in caretaker's quarters, a new cesspool was built in yard and a new hardwood floor was laid in canal office.

Work supervised by Thos. H. Hastings, of this department, Toronto, Ont.

SARNIA.

PUBLIC BUILDING.

Alterations and rearrangement of and addition to the post office box and drawer screen were effected; a screen was erected at head of stairs; the customs fittings were altered and the quarters of the caretaker were papered and kalsomined.

Work supervised by Thos. H. Hastings, of this department, Toronto, Ont.

ST. THOMAS.

PUBLIC BUILDING.

A lavatory and bath were fitted up in caretaker's quarters and some minor general repairs done to the building, all under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

SANDWICH.

POST OFFICE.

This building, which was described in a previous report is completed, fitted with electric lighting, hot water heating, office fittings, furniture, &c., and occupied.

Plans, &c., prepared by this department.

Clerk of works, John Maclean.

Contractor, Geo. Alfred Proctor.

Contractor for fittings, J. Maclean.

Contractor for footpaths, C. W. Cadwell.

STRATFORD.

ARMOURIES.

This building which was described in a previous report is completed, fitted with electric lighting, hot water heating, armoury fittings, &c.

The grading of the grounds was done by day labour under the superintendence of Neil R. Darragh, architect, St. Thomas, Ont.

Plans, &c., prepared and work supervised by H. C. Macbride, architect, London.

Contractors, Nagle & Mills.

Contractor for fitting, D. Essen.

PUBLIC BUILDING.

Alterations and rearrangements of post office fittings and lighting were effected; the caretaker's quarters were painted and kalsomined and the boiler repaired.

Work supervised by Thos. H. Hastings, of this department, Toronto, Ont.

ST. MARYS.

PUBLIC BUILDING.

A contract for the construction of this building on a site at the corner of Water and Queen streets was entered into on September 29, 1906.

The building consists of a main portion of two stories and basement of stone with a wooden attic, having a frontage of 50 feet by a depth of 40 feet and a one-story and basement adjunct of stone, in rear, 52 feet long by 19 feet broad. The basement is for the heating apparatus, fuel and stores; the ground floor for the post office in the main portion and for the examining warehouse, weights and measures and water closets in the adjunct; the first floor for the customs and inland revenue, while the attic is unfinished. There are brick vaults one each on basement, ground and first floors. A number of the partitions on the first floor, the stairways, the roof and the floors excepting the basement floor which is concrete are of wood, the partitions generally being of brick.

Plans, &c., prepared by this department.

Clerk of works, J. C. Weiderhold.

Contractor, Robert Cameron.

TORONTO.

INLAND REVENUE BUILDING.

An iron hood was placed over entrance and metallic steps provided, a new drain with traps was laid; the building was painted inside and outside and a number of articles of furniture supplied. All under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

ST. MARYS.

DRILL HALL EXTENSION.

This work which was described in my report of last year is yet in progress. Plans for hot water heating and electric lighting services are prepared.

Plans, &c., prepared by this department and work supervised by S. G. Curry, architect.

Contractors, Sullivan & Langdon.

POSTAL STATION 'F'.

This building which was described in a previous report is yet in progress of construction. Hot water heating and electric lighting are being installed.

Plans and specification prepared by this department and work supervised by S. G. Curry, architect.

Contractors, Brown and Love.

Contractors for hot water heating system, Bennett & Wright.

Contractors for post office fittings, Chas. Rogers & Son Co.

Contractors for electric wiring, McDonald & Wilson.

GENERAL POST OFFICE.

A new screen was erected and the street letter and newspaper boxes were painted; all under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

POSTAL STATIONS 'B' AND 'G.'

Alterations, painting and repainting were executed at these buildings under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

WALKERTON.

PUBLIC BUILDING.

This building was cleaned, painted and kalsomined and repairs were made to carpentry, all under the supervision of Thos. H. Hastings, of this department, Toronto, Ont.

PROVINCE OF MANITOBA.

BRANDON.

The offices of the inland revenue were furnished, fitted up, carpeted, &c.

The interior of the building was cleaned, the walls and ceilings tinted and the woodwork painted under the supervision of Jos. Greenfield, superintendent of public buildings, Manitoba, Winnipeg, Man.

PORTAGE LA PRAIRIE.

PUBLIC BUILDING.

The customs long room was enlarged, the counter therein extended and necessary filing cases provided. The collector's office was fitted up and plumbing fixtures installed throughout the building.

Work supervised by Jos. Greenfield, superintendent of public buildings, Manitoba, Winnipeg, Man.

ST. BONIFACE.

PUBLIC BUILDING.

A contract was entered into on March 4, 1907, for the construction of this building on a site having a frontage of 66 feet on Provencher street and extending back along Aulneau street, a distance of 99 feet to a lane in the rear.

The building is two stories, of brick, with stone dressings, and on a stone basement measuring 34 feet by 54 feet. The basement is lined with brick ; there are brick vaults, one each in basement and on ground floor and two on first floor, and the partitions of basement and ground floor as well as the chimney are of brick. The floors, stairway and roof, excepting the basement floor which is concrete, are of wood; the roof covered with tar and gravel. The basement is for heating apparatus, fuel and storage; on the ground floor the front portion is for the post office and the rear for the weights and measures and examining warehouse. There are lavatory rooms on both ground and first floors.

Plans, &c., prepared by this department.

Clerk of works, Stanislaus Paquette.

Contractor, J. McDiarmid.

WINNIPEG.

CUSTOM-HOUSE.

A telephone box and a counter were fitted up; repairs were made to plumbing, carpentry, gas fitting, eaves trough and furnace and some articles of furniture supplied.

Work supervised by Jos. Greenfield, superintendent of public buildings, Manitoba, Winnipeg, Man.

EXAMINING WAREHOUSE.

The test room was extended, fire extinguishers and grate bars were supplied, alterations in gas fittings were made and repairs effected to furnace, scales, &c., under the supervision of Jos. Greenfield, superintendent of public buildings, Winnipeg, Man.

IMMIGRATION BUILDING, NO. 1.

This building is completed, fitted up with electric lighting, electric bells, hot water heating, ventilating fans, electric elevator, fire-extinguishing plant, incinerator, water storage tank, electric pump with electric starting machinery of a capacity to ensure abundance of water, beds, furniture, fittings, carpets, wire window guards, wire fences, &c., &c.

Plans, &c., prepared by this department and work supervised by Jos. Greenfield, superintendent of public buildings, Manitoba, Winnipeg, Man.

IMMIGRATION BUILDING NO. 2.

Troughs, were fixed to all eaves, the electric wire connected at the building was overhauled and the building was supplied with fire extinguishers; all under the supervision of Jos. Greenfield, superintendent of public buildings, Manitoba, Winnipeg, Man.

IMMIGRATION BUILDING NO. 3.

The plank floors were taken up and replaced by cement floors, troughs were fixed to all eaves, and ventilation fans were installed for the purpose of ventilation; all under the supervision of Jos. Greenfield, superintendent of public buildings, Manitoba, Winnipeg, Man.

WINNIPEG.

LANDS OFFICE.

Repairs were made to heating, drainage, tank and doors and the shelving in vault was extended; all under the supervision of Jos. Greenfield, superintendent of public buildings Manitoba, Winnipeg, Man.

MILITARY STORES BUILDING.

This building, which was described in a previous report, is completed and occupied. An electric elevator and electric lighting were installed; fittings for stores were erected; a granolithic walk was laid; a fence and gates built; awnings supplied; the superintendent's quarters were papered, and fire extinguishers were supplied.

Work supervised by Jos. Greenfield, superintendent of public buildings, Manitoba, Winnipeg, Man.

POST OFFICE.

The mezzanine floor was further extended; a large water tank was supplied; two hand elevators were fitted up; electricity was substitued for gas in lighting letter sorting department, and there were supplied, steel cabinets, special sorting cases and baggage trucks.

Work supervised by Jos. Greenfield, superintendent of public buildings, Manitoba, Winnipeg, Man.

NEW POST OFFICE.

The construction of this building, which was described in my report of last year, has since been continuously carried on and is still in progress.

Plans prepared and work supervised by Darling and Pearson, architects, Toronto, Ont.

Contractors, Kelley Bros. Company.

Clerk of works, Robert Wilson.

PROVINCE OF SASKATCHEWAN.

MEDICINE HAT.

PUBLIC BUILDING.

This building, which was described in my report for 1905-6 is still in progress.

Plans and specification prepared by this department.

Clerk of works, W. D. Williams.

Contractors, Oakes and Everard.

MOOSEJAW.

LAND OFFICE.

Temporary shelving and counters were put in under the supervision of W. T. Mollard, clerk of works, Regina, Sask.

REGINA.

DOMINION LANDS OFFICE.

The office was fitted up with new steel office fittings and furniture and a fire escape outside. Additions and repairs were made in wiring, kalsomining, painting, &c.

Work supervised by W. T. Mollard, clerk of works, Regina, Sask.

POST OFFICE.

The floor area of the post office was increased. The post office fittings were rearranged and added to, the new letter boxes and furniture were provided. General repairs were made to lock boxes, carpentry, &c.; all under the supervision of W. T. Mollard, clerk of works, Regina, Sask.

PUBLIC BUILDING.

This building, which was described in my report of last year, is in progress of construction.

Plans and specification prepared by this department.

Work supervised by W. T. Mollard, clerk of works, Regina, Sask.

PROVINCE OF ALBERTA.

CALGARY.

ADDITION TO POST OFFICE BUILDING.

This building which was described in my report of last year has since been continuously in progress of construction and is being fitted up with hot water heating and electric lighting. Tenders for an electric elevator are about to be invited.

EDMONTON.

IMMIGRANT SHED.

This building, which was described in my report of last year, has been completed, fitted up with hot water heating and electric lighting and furnished ready for occupation.

Plans &c., prepared by this department.

Clerk of works, H. J. Manson.

Contractor for construction, Thomas Page.

Contractor for electric wiring, The N. W. Electric Co.

Contractor for hot water heating apparatus, The Standard Plumbing & Heating Co.

EDMONTON.

PUBLIC BUILDING.

On January 16, 1907, a contract was entered into for the construction of this building on a plot of ground situated on the southwest corner of the intersection of Rice and Macdougal streets having respective frontages of 151 feet and 90 feet.

The building, on plan, measures 130 feet by 80 feet and consists of 3 stories, basement and attic, excepting a portion 22 feet square, on the street corner, which is carried up 5 stories above basement, terminating 86 feet above ground line, and surmounted by an octangular tower with domed top which finishes, 116 feet above ground line exclusive of a flag staff. The external walls and the vaults are of concrete, lined with brick, in basement, and of brick for the succeeding stories. On the street frontages the facing of the basement and ground floor walls, the columns and cornice, the window dressings of the first and second floors, the quoins and dressings of the tower and the walls of the lantern are of stone; the roof of the lantern and the facing of the attic or third floor being wood covered with copper. The piers in basement are brick and iron and the columns reaching up therefrom through the building are iron encased in concrete. The floors and ceilings are iron and plaster excepting those

inclosing the stairway and lavatories which are brick from the basement floor to the attic ceiling. The basement is undivided excepting that the stairway, elevator and lavatory are inclosed and that there is one concrete vault lined with brick. All the ground floor excepting a portion in rear, measuring on plan 37 feet by 37 feet, for examining warehouse and weights and measures and also the stairway and the vestibule thereto, is the post office; all the first front on Rice street excepting the lavatory and staircase is divided between the post office Inspector and the dead letter branch The second floor is for the custom-house, and the attic or third floor is unallotted except a small space in rear which is divided into apartments for the caretaker. There are brick vaults on ground, first and second floors.

Clerk of works, H. J. Manson.

Contractors, the May Sharpe Construction Co.

PROVINCE OF BRITISH COLUMBIA.

FERNIE.

PUBLIC BUILDING.

Plans and specification are prepared and tenders invited for the construction of this building on lot 11 Block 10, Town site of Fernie, which site has frontages of 60 feet, 120 feet and 60 feet on Pellat Avenue, Cox street and Lane respectively.

The building has a frontage of 52 feet on Pellat Avenue by a depth of 69 feet. It has two stories of brick, with stone dressings, on a stone basement. In the basement the lining of the outside walls, the piers and the partitions are of brick and there are brick vaults on ground and first floors. The ground and first floor partitions, floors and stairway are of wood, and the basement floor is of concrete. The roof covering is of tar and gravel. The entrance steps, the string course between ground and first floor, and the quoins and keystones on Pellat and Cox streets frontages, are of stone, the stoop and steps to mail entrance and to examining warehouse are of concrete and the cornices and copings are sheet metal.

The basement has furnace room, fuel room, stairway hall and storage; the ground floor has three-fourths of the floor area devoted to the post office and the remainder to stairway hall, vestibule, examining warehouse and weights and measures office, while the first floor contains the customs and inland revenue offices. There are brick safe rooms, one on the ground floor and two on the first floor; separate lavatories for males and females are provided on the first floor. Water supply is from the main in Cox street. The drainage is to a cesspool.

Plans, &c., prepared by this department.

KAMLOOPS.

PUBLIC BUILDING.

The ground and first floors were ceiled with metal; the caretaker's apartments were cleaned, kalsomined and painted; a new partition was erected at head of stairs; a coal bin was constructed in basement; a foot-path street crossing was constructed; a number of fittings were supplied the post office; electric fixtures were supplied and fitted up and repairs were made to front door, awnings and lock letter boxes.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

NELSON.

PUBLIC BUILDING.

The yard and driveway were excavated and paved on rock foundation with tar, gravel and crushed rock; alterations and minor additions were made to post office

fittings; alterations of counter, desk, &c., were made in inland revenue offices; some picture moulding was put up, some lavatory basins fitted up and some transoms changed in the weights and measures office; a lobby was constructed at main entrance with double swinging doors; a driveway for heavy traffic was constructed over sidewalk; a partition was changed; grille work to counter, pigeonhole cupboard, additional lights and drawer locks were supplied the customs offices; a wardrobe was supplied to caretaker; wire screen was fitted over delivery wicket; repairs and alterations of heating, plumbing and cupboards were done, and some linoleum, electric lights, &c., were supplied.

Work done under the supervision of Wm. Henderson, Resident Architect, Victoria, B.C.

NANAIMO.

PUBLIC BUILDING.

Eighteen street letter boxes were painted and varnished; a number of door checks and electric lights were supplied and the woodwork and furniture of customs were in part renovated.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

NEW WESTMINSTER.

INDIAN AFFAIRS AND FISHERIES OFFICE BUILDING.

This building which was described in my report of last year has been completed, fitted up with a hot water heating apparatus and electric lighting and furnished ready for occupation.

Plans, &c., prepared by this department.

Clerk of works, Wm. Turnbull.

Contractors, R. Buckland and J. Carter Smith.

PUBLIC BUILDING.

The examining warehouse was enlarged by taking in the old Indian office and new shelving, pigeonholes, &c., fitted up therefor; the caretaker's quarters were cleaned, kalsomined, painted and varnished; a set of shelves was put in vault; bell batteries and door check were supplied the customs; a bracket, desk and stepladder were supplied the Dominion lands office; a steel wheelbarrow, an ensign, steel hooks, lamps, reflectors, shades and tap were supplied and repairs were effected to plumbing and the woodwork, gas fitting, heating pipes and lawn mower were repaired.

Work done under the supervision of Wm. Henderson, Resident Architect, Victoria, B.C.

VANCOUVER.

POST OFFICE.

This building which was described in my report of last year has been in progress of construction since.

Plans and specification prepared by this department.

Clerk of works, Chas. Tossell.

Contractors, Kelly Bros. & Mitchell, Limited.

PUBLIC BUILDING.

The plumbing generally was repaired; the drain from the building to main sewer and the drain in basement were in part renewed and were cleaned monthly; the stone coping at side entrance was drilled and stayed; the customs department was supplied

with pigeonhole cases, tables, blinds, cork carpet, standing desks, stool, arm-chairs, lights, door mats, holders, shades, letter-box plate, extension cords and Yale locks; the post office department was supplied with carpets, post office boxes, locks, letter sorting cases, wax heating pot, buzzer, vault fittings, tables, wall desks, letter-box plate, water closet, pigeonhole case, partition gate, guard-rail, shelving, stools, chairs, brackets, hat and coat hooks, door springs, wardrobe, mail truck, cupboard, keyboard, drawers, plate-glass, lumber, nails and cork carpet and the inland revenue department was supplied with two book cases. The roof and skylight were repaired and two galvanized iron canopies were supplied and fitted over skylight; the conductor pipe at western mail entrance was taken down; electric bells were hung and the walls and ceilings kalsomined and the woodwork painted in postmasters room; the post office generally was cleaned, kalsomined and painted ; some electric lights were installed; post office boxes, signs and keyboards were lettered or numbered and repairs were made to cancelling machine, clocks, doors, batteries, plumbing, 'phones, buzzer, &c.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

VICTORIA.

INDIAN AFFAIRS AND MARINE OFFICE (OLD CUSTOM-HOUSE.)

The roof of shed was repaired and painted; the old earthenware drain under building was removed and a cast-iron drain substituted; a file cabinet was supplied to the steamboat inspector's office and the plumbing as well as the water service on wharf were repaired.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

MARINE HOSPITAL.

Repairs were made to plumbing, under the supervision of Wm. Henderson, Resident Architect.

PUBLIC BUILDING.

An electric motor, eight pigeonhole cases, a sorting board and envelope rack, locks and keys and 100 feet of hose were supplied the post office; heating stoves and pipes were supplied to and fitted up in the meteorological office; new lights were installed in Appraiser's office and letter carrier's room; coal hods, coal shovels and floor oil were supplied and repairs were made to furnaces, plumbing, bells, &c.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

OLD POST OFFICE BUILDING.

A galvanized iron stack was made for and fitted to chimney and the plumbing and roof repaired under the supervision of Wm. Henderson, Resident Architect, Victoria, B.C.

WILLIAM HEAD.

QUARANTINE STATION.

The wood partition wall between boiler room and retort shed was cut out and brick wall substituted; this wall sustains the roof at one side of the disinfection shed. A convalescent ward for isolation hospital was erected. A retaining wall was constructed in boiler room for coal shed. New doorways to boiler room and retort shed were cut and frames with doors built in. Two boilers were suspended on iron beams and brick piers, the position of one boiler was changed, a new boiler was supplied and connected

and the boilers and steam pipes were covered with asbestos. In the convalescent's building, the old hearths were taken out and renewed; the piping of cylinder and retort was overhauled, and there were supplied and connected four shower baths and one bath tub. Repairs were made to plastering in Dr. Watt's residence and in general hospital.

Work supervised by Wm. Henderson, Resident Architect, Victoria, B.C.

YUKON TERRITORY.

DAWSON.

GOVERNMENT HOUSE.

On December 25, 1906, the interior of this building was damaged by fire and the furniture, carpets, &c., contained therein entirely ruined.

BUILDINGS GENERALLY.

General repairs and maintenance of the various public buildings throughout the territory were effected under the supervision of S. A. Bertrand, superintendent of public buildings, Yukon Territory.

PART IV

CHIEF ENGINEER'S REPORT

ON

HARBOUR AND RIVER WORKS

INCLUSIVE OF

GRAVING DOCKS AND DREDGING OPERATIONS

ALSO

ROADS, BRIDGES AND SURVEYS THROUGHOUT THE DOMINION.

REPORT OF THE CHIEF ENGINEER.

DEPARTMENT OF PUBLIC WORKS OF CANADA,
CHIEF ENGINEER'S OFFICE,
OTTAWA, October 7, 1907.

FRED. GÉLINAS, Esq.,
Secretary,
Department of Public Works.

SIR,—I have the honour to submit the annual report on the various works under my charge during the fiscal year ended March 31, 1907.

These works comprise the construction and repair of wharfs, piers, breakwaters, dams, weirs, bank and beach protection works ; the improvement of harbours and rivers by dredging ; the construction, maintenance and operation of government dredging plant ; the construction and maintenance of graving docks ; the construction, maintenance and working of slides and booms ; the construction and maintenance of interprovincial bridges and approaches thereto, and of bridges on highways of federal importance in the Northwest Territories and the maintenance of military roads ; also hydrographic and ordinary surveys and examinations, inclusive of precision levelling and geodetic measurements which are required for the preparation of plans, reports and estimates ; the testing of cements, &c.

I have the honour to be, sir,
Your obedient servant,
EUG. D. LAFLEUR,
Chief Engineer.

PROVINCE OF NOVA SCOTIA.

AMAGUADEES.

Amaguadees Pond, Cape Breton county, is on the northern side of East bay, the eastern arm of Great Bras d'Or lake, about three miles from Benacadie point, at the entrance to and sixteen miles from the head of the bay.

It is a large sheet of water, about one mile in length and a quarter of a mile in width, with a considerable depth of water, separated from the bay by a beach of gravel, overlying clay, of from 100 to 200 feet in width, and about 4 feet high above the summer level of the lake. The outlet is at the eastern end of the beach, but as it was only open for short periods after freshets, and only available to small boats, the pond was not of any practical benefit to the inhabitants.

During 1902-3-4, the sum of $3,980.52 was expended in the construction of a block and span wharf, extending to 11 feet at low lake level, 128 feet in length and 20 feet

wide, with an 'L,' 20 by 20 feet, on the eastern side of the outer end, and built on the outside of the beach at a point about 600 feet from its eastern end. The blocks are constructed with round timber, creosoted to high lake level.

After the construction of the wharf, the outlet of the pond, which formerly was only open at times, not only remained open, but it widened and deepened to such an extent, as to interfere with the traffic to and from the wharf.

The sum of $500 was expended during 1905-6, towards the construction of a bridge across the outlet, 100 feet in length and 16 feet wide, and consisting of approaches, built of brush and stone, 30 and 22 feet in length with cribwork blocks at their outer ends 12 feet long, and of a span between them, 24 feet in length; and of the work described, the approaches and the blocks were constructed during the year.

During the fiscal year 1906-7, the sum of $245.96 was expended in the completion of the bridge, commenced during 1905-6, by ballasting the cribwork blocks, and by laying the covering over the blocks and the span.

AMHERST POINT.

Amherst Point is a farming settlement of some 400 people, situated about three miles south of Amherst town.

In order that the farmers might be able to ship their produce in the fiscal year 1905-6, the department began the construction of a wharf at this place. During that year, about $1,700 was expended, and during the last fiscal year an additional sum of $3,784.93. This work was slightly more than two-thirds completed at the end of the last fiscal year. It consists of two portions: an approach and a cribwork wharf.

The approach is 600 feet long and 16 feet wide with an average height of 7 feet. It consists of round log cribwork, close-faced and filled in with mud, excavated from the marsh land.

The wharf is of round log, close-faced and stone filled cribwork, well fastened and fendered. It is 155 feet long with a common width of 20 feet on top, with the exception of the last 30 feet, which has a width of 40 feet on top. Its height at the outer end is 29 feet, and besides this we excavated the bottom surface to a depth of 5 feet, and built up the cribwork on the foundation of mattresses of brush and stone placed in this excavation. The brush and stone foundation is about 2½ feet in thickness, and extends the whole length and width of the work. Spring tides rise here 40 feet and neaps 33 feet.

In constructing this work, we met with two difficulties, first the increased cost and scarcity of labour, and second, difficulty in procuring stone for ballast. These two difficulties much enhanced the cost of the work, and these, with the increased cost of timber caused the estimate to be inadequate for the completion of the work.

ANDERSON'S COVE.

Anderson's Cove, Annapolis county, is a scarcely perceptable indentation in the coast line, on the south side of the Bay of Fundy, sixteen miles east of Digby Gut, two miles east of Litchfield, and two miles west of Parker's Cove. The settlement, which is called Hillsburn, comprises, within a radius of a mile, about 150 people dependent almost exclusively on the fisheries for a living.

In order to afford some small measure of protection and shelter for the boats, which were often broken or destroyed for lack of shelter, the department, in 1905-6, expended the sum of $1,813.29 in constructing a small breakwater, 162 feet long, from 7 to 13 feet high and 26 feet wide.

In 1906-7, the sum of $1,000 was expended in extending the breakwater by a substantial block of cribwork, 50 feet long, 26 feet wide, and from 12 to 15 feet high.

Spring tides rise about 30 feet.

ANNAPOLIS ROYAL.

Annapolis Royal, Annapolis county, is the oldest town in the province of Nova Scotia, having been founded in 1605. It is beautifully situated at the head of Annapolis basin, and on the left or south side of Annapolis river. It has a population of about 2,000 people, and is the centre of one of the most fertile districts in Nova Scotia.

On the water front of the town there has not been, for many years, a public wharf or landing. The Queen's wharf, so called, at the east end of the town, is supposed to have been first constructed during the French occupation in the 17th century. In or about 1868, it was repaired and extended, and made serviceable for the accommodation of the steamer which plied between Annapolis, Digby and St. John, N.B., before the construction of the railway from Annapolis to Yarmouth. Both the original construction and the extension were in cribwork.

The wharf being for a great many years a complete wreck, and, to a certain extent, a danger to navigation, the department, in 1905-6, expended the sum of $3,885.75 in building a completely new structure on the site of the old one. At the close of the fiscal year, the work was about three-quarters finished.

In 1906-7, $4,078.70 was expended on the work, which, at the close of the fiscal year, was not quite completed.

It consists of an approach of stone and earth, walled on each side, 250 feet long, 30 feet wide and of an average height of 8 feet. This approach is followed by a pile-work structure, 240 feet long by 30 feet, wide, with a T on the outer end, 90 feet long on the face by 40 feet wide. The piles in the T are creosoted. Along the face the work is about 36 feet high, with 32 feet of water at H.W.O.S.T. and about 7 feet at low water. On the north side of the stem, next to the T is a flight of steps for the accommodation of boats and small craft, and in the centre of the face of the work, a lifting slip, operated by a powerful double hand winch, for the convenience of steamers. The slip was not in position at the close of the fiscal year.

Spring tides rise 29 feet, neaps, 23 feet.

APPLE RIVER.

Apple River is a small hamlet of about 300 people, situated near the mouth of Chignecto bay, about thirty miles southwest of Amherst town. The people are mostly farmers and lumbermen, whilst some fishing is conducted by a few of them. The chief industry, however, is lumbering, from seven to ten millions feet of lumber being shipped annually from this port.

As it lies on a very exposed section of the shore, the department, during the last fiscal year, constructed a breakwater at this place, the contract price being $7,300. This work was completed quite early in the fall of 1906, and is a substantial structure.

The breakwater consists of a rock bank approach, 27 feet in length, 20 feet wide on top and 8 feet high at the outer end; the wharf proper, which is constructed of continuous round log, stone filled cribwork, measures 254 feet in length, 16 feet in width on top and 36 feet in height at the outer end. The cribwork is built with a batter of 2 inches to the foot on the seaward side, and 1 inch to the foot on the inner side. The outside face and the outside end are sheathed with 7-inch face timbers, placed in an upright position and bolted to every alternate longitudinal face log crossed, the thickness of these timbers being 5 inches. Before building this cribwork, the bottom of the work or rather the foundation was excavated for the whole length and width of the work to a depth of 5 feet, and a 2-foot thick series of mattresses of stone and brush was laid in this excavation; upon these mattresses the work was laid.

Spring tides rise here 38 feet, and neaps 32 feet.

Expenditure during fiscal year of 1906-7, $7,573.

ARISAIG.

Arisaig, Antigonish county, is on the southeastern shore of Northumberland strait, about fifteen miles southeast from Cape George.

The works at this place include a pier on the northern and a breakwater on the southern side of the cove.

The breakwater, constructed during 1887-8, was 380 feet in length, extending to 5 feet at low water, and 20 feet wide, with an 'L' on the southwestern side of the outer end, 40 feet long and 20 feet wide, and with the exception of 80 feet at the inner end, which is of stone, it is constructed of close-faced, native timber cribwork, fully ballasted, and the outer 50 feet and the 'L' were protected by close-sheathing.

From natural decay, the top of the breakwater became weakened, and the outer end with the 'L' has been destroyed by the teredo.

The sum of $2,200 was appropriated for expenditure during 1905-6, to construct the top of the outer end of the approach, for a distance of 50 feet, and for the construction of a creosoted timber block, 20 by 30 feet, at the outer end of the breakwater; but, owing to the non-delivery of the creosoted timber required, the sum of $1,263.52 only was expended, and that was for the construction of the outer 50 feet of the old top of the approach, and for procuring the native timber required for the top of the proposed outer block.

The sum of $1,500 was voted for expenditure during 1906-7 to complete the outer block, but again, owing to the non-delivery of the creosoted timber required, the sum of $499.23 only was expended for ballast.

AVONPORT.

Avonport, King's county, is a small farming village with a population of about 250, situated at the mouth of the Avon river (at this point nearly two miles wide) and on the Dominion and Atlantic railway, twelve miles northwest of Windsor, the county town of Hants, and thirteen miles east of Kentville, the county town of King's.

A small wharf, of ordinary round-log, stone-filled cribwork, was built before Confederation by the inhabitants, aided by the provincial government. It is 300 feet long, 22 feet wide to 25 feet wide on top, and 17 feet high at the outer end, which is dry, at L.W.O.S.T.

In 1886, the department having assumed control of the wharf some little time previously, spent $1,200 in extensive general repairs. During the year 1896-7, the sum of $500 was expended in rebuilding the top of the shoreward half of the work; the covering, floor stringers, and upper two or three logs in height were renewed.

In 1900-1, the sum of $998.90 was expended in extensive renewals.

In 1906-7, the sum of $599.77 was expended in rebuilding the approach to the public wharf, which had been partially destroyed by waves and ice. The work is 400 feet long, 18 feet wide and from 3 to 10 feet high, consisting of a brush and stone embankment with fenders and ties eight feet apart.

BABIN'S COVE.

Babin's Cove, Richmond county, is on the north side of Arichat harbour, Isle Madame, and nearly opposite its western entrance.

A wharf, intended for winter service, was constructed by the department, under contract, during 1893-4 and 1894-5, and connected with the public road by a road 410 feet in length. It is 100 feet in length, including a stone abutment, 20 by 20 feet on top, with sides and outer end sloping 1½ to 1, an inner block, 20 by 20 feet, and an outer block 25 by 40 feet on top, with openings or spans of 17½ feet between the blocks and between the inner block and the stone abutment. The blocks are of round native timber cribwork fully ballasted. The outer and end faces of the outer block are close-sheathed.

The depth at extreme low water, at the outer end of the wharf, is 11 feet. Spring tides rise 5 feet.

In 1903-4, the sum of $99.34 was expended in constructing a small warehouse on the outer end of the wharf.

During the fiscal period of nine months ended March 31, 1907, the sum of $140.66 was expended in removing fourfifths of the covering and about 80 lineal feet of the guard-rail of the wharf.

BADDECK.

Baddeck, the shiretown of the county of Victoria, is on the northern shore of the Little Bras d'Or lake, near the entrance into St. Patrick's channel.

On September 12, 1906, a plan and specification for the construction of a public wharf on the Campbell property were submitted for approval, and on March 2, 1907, a contract for its construction, in the sum of $10,690, was entered into with Mr. Hugh MacDonald, but, up to the end of March, 1907, the work had not been commenced.

The work under contract is to be 284 feet in length, and will extend into 18 feet at low water; it will consist of a road approach, 64 feet in length; of a section of crib-work with creosoted timber substructure, 60 feet long and 48 feet wide; and of a creosoted timber pile extension, 160 feet long and 40 feet wide.

Expenditure during last fiscal year, $222.23.

BAILEY'S BROOK.

Bailey's Brook, Pictou county, is a large stream emptying into the strait of Northumberland, at a point ten miles to the eastward of the entrance to Merigomish harbour, and six miles to the westward of Arisaig.

The channel protection works, undertaken in 1902-3, and completed in 1904-5, include a breakwater on the eastern side, 240 feet in length and 20 feet in width on top, extending to low water mark, and a shear-dam, on the western side, 130 feet in length and 12 feet in width, founded at low water.

In 1905-6, the sum of $1,999.82 was expended in procuring materials for the proposed extension of the shear-dam, 164 feet in length, 16 feet in width to within 20 feet of the outer end, and 30 feet width over the outer 20 feet, and in constructing, placing and ballasting 120 feet of its substructure.

During the fiscal period of nine months ended March 31, 1907, the sum of $1,982.35 was expended in completing the extension of the shear-dam in progress in 1905-6.

BARRINGTON PASSAGE.

This passage is a sheet of water separating Cape Sable island from the mainland, and vessels plying between Nova Scotia ports, east of Barrington, with Yarmouth, Boston and American ports on the Atlantic seaboard and able to use this passage, save twenty or thirty miles on their trip. There have been several ledges composed of large loose boulders lying across this passage, with the result that, at low tide, vessels have often struck and incurred much damage as well as annoying delays. Two years ago, the department began the work of removing these boulders, and during the last fiscal year this work was completed.

Last year we expended $2,993.50, whilst in the two years preceding we expended within a few dollars of $5,000 upon the same work. During last fiscal year, about 650 tons of stones were removed from this place, and after examination with the aid of divers no obstruction could be found in this channel.

This work was accomplished by the Provincial Wrecking Company's plant and was performed at a cost per ton of slightly more than $4.55. When work was begun in this channel, one could only depend upon 9 feet of water, whilst now there is 13 at L.W.O.S.T.

BATTERY POINT.

Battery Point, Annapolis county, is a fishing settlement of about 150 people, situated on the east side of Digby Gut, about four miles northeast from the town of Digby, and fifteen miles southwest from the town of Annapolis.

In 1904-5, the sum of $1,987.32 was expended in constructing a breakwater for the protection of the fishing fleet, comprising 40 to 50 boats. The work is 90 feet long, 26 feet wide, 8 feet high at the shore end and 19 feet high at the outer end. The approach is a stone embankment, 38 feet long, 26 feet wide and from 4 to 8 feet high.

At the end of the fiscal year the work was completed, with the exception of a few fenders.

In 1905-6, the sum of $2,000 was expended in constructing an extension to the breakwater. The new block is 60 feet long, 26 feet to 30 feet wide and from 20 to 29 feet high, very strongly built of round-long cribwork, furnished with a break on the seaward, side, close-sheathed on the seaward side and outer end and on the inner or southern side, and provided with a flight of steps for the accommodation of boats.

In 1906-7, the sum of $668.40 was expended in completing the new block.

Spring tides rise 27 feet; neap, 23 feet.

BAXTER'S HARBOUR.

Baxter's Harbour, King's county, is a small harbour on the south side of Minas channel, Bay of Fundy, about midway between Scott's Bay and Hall's Harbour, about six miles from each. The settlement has a population of about 200 people, engaged in fishing and farming.

The harbour is merely a slight indentation on the coast line, with a small wharf or breakwater on one side and a reef of rocks on the other, leaving an opening about 180 feet in width between them, into which small schooners can enter at about two hours ebb and flood.

The little breakwater which was built many years ago by the inhabitants, aided by the provincial governmnet, having become a complete wreck, the department, in 1905-6, expended the sum of $2,258.69 in building a substantial breakwater of cribwork on the site of the ancient structure. The work, which was not completed at the end of the fiscal year, is 100 feet long, 26 feet wide and from 5 at the inner end to 20 feet high at the outer end, well fendered and filled with ballast.

In 1906-7, the sum of $745.54 was expended in completing the work.

BAYFIELD BREAKWATER.

Bayfield, Antigonish county, is on the southern shore of St. George's bay, fifteen miles to the westward of the northern entrance to the Strait of Canso.

There are two works at this place : a wharf 442 feet in length, built in 1892-4, and breakwater (cribwork, core and stone embankment), 760 feet in length, commenced in 1879 and completed in 1888.

Repairs and improvements to the breakwater, including the construction of a concrete wall 525 feet in length over the inner face of the cribwork core, (150 to 675 feet from the inner end) and the reconstruction of the stone covering on each side of the wall, undertaken in 1903-4, was completed in 1904-5, with the exception of 300 feet of covering on the seaward side and of the grouting (with concrete) between the wall and high water on each side, over a distance of 365 feet (150 feet to 515 from the inner end). In 1905-6 the sum of $1,600 (the amount appropriated) was expended in completing the repairs and improvements in 1903-4.

During the fiscal period of nine months ended March 31, 1907, $1,799.73 was expended in extending the concrete wall 70 feet and in reconstructing and grouting, with concrete, the covering of the talus on the northern side of the concrete wall (150 to 675 feet from the inner end) which had been damaged after completion of repairs in 1905-6, and on the northern side of the extension.

BEAR COVE.

Bear Cove, Digby county, is a slight indentation, not more than 400 feet deep, in the coast of the mouth of St. Marys bay, Bay of Fundy. It is situated twenty-three miles north of Yarmouth, and equi-distant from Cape Cove on the south and Meteghan on the north, being about five miles from each. The population of the settlement, within a mile of the cove, comprises a couple of hundred of people, chiefly dependent for a living on fishing, though some little farming is carried on. The fishing fleet comprises about twenty-five small boats, the annual value of the catch, embracing cod, herring, lobsters, &c., is from $7,000 to $10,000.

In order to afford some small measure of protection for the fishing fleet, the department, on October 10, 1905, awarded a contract, for the construction of a breakwater, in the sum of $5,748.92.

The work was begun in May, 1906, and at the close of the fiscal year 1905-6, it was about half completed. The work was satisfactorily completed at the end of September, 1906.

Spring tides rise 21 feet; neaps, 17 feet.

The total expenditure during 1906-7, amounted to $3,883.92.

BEAR RIVER.

Bear River, Annapolis county, situated at the head of navigation, five miles above the two bridges, highway and railway, which are near the mouth of the river, is an important and prosperous settlement, partly in Annapolis and partly in Digby counties, the river forming the boundary between the two counties. Large quantities of piles, cordwood and lumber are annually shipped to South America, the West Indies and the United States.

In 1901-2, the sum of $3,000 was expended in removing the upper portion of an old pier of the highway bridge, which was rebuilt by the provincial government about twelve years ago, on a site about 100 feet farther up stream. This old pier bottom, which was removed to a depth of 5 feet below low water spring tides, was so close to the channel that it was a source of danger to vessels passing up and down. The dropping pier on the down stream side of the swing span of the highway bridge, was also rebuilt in substantial pilework, the new pier being 180 feet long, 25 feet wide and from 20 to 30 feet high, strongly built of pile bents, well braced, fendered and bolted, provided with mooring posts and rings, and with three rows of hardwood walings on the river face. Of the total expenditure of $3,000, the sum of $249.17 was expended in the purchase of piles and timber for the rebuilding of the drop-pier on the upper side of the highway bridge.

In 1902-3, the sum of $1,611.35 was expended in rebuilding the dropping pier of the upstream side of the Victoria highway bridge.

In 1905-6, the sum of $584.86 was expended in the purchase of materials for the purpose of rebuilding in cribwork the upper end of the dropping pier, which was severely injured by the heavy ice of the exceptionally severe winter of 1904-5.

In 1906-7, the sum of $338.35 was expended in beginning the construction of the new block.

BEAVER RIVER.

Beaver River, Yarmouth county, is a prosperous fishing and farming village of some 400 people, situated on the coast of St. Mary's bay, thirteen miles north of Yarmouth, and on the county line between Digby and Yarmouth. The little stream which issues here discharges through a gravel beach, which formerly, when the stream was low, obstructed its mouth and finally closed it altogether, so that the water has to find exit by soakage through the gravel.

In 1886-7, operations were begun by the department to improve the river mouth and remedy this defect. A passage was cut through the gravel and sea wall, and a short breakwater was built on the south side of the mouth to catch the gravel and prevent the bank reforming; besides protecting the river mouth, the breakwater forms a good though short landing pier for vessels during the summer months. This work proving satisfactory, the sum of $1,500 was expended by the department in 1888-9, in further improvement. This consisted of extending the breakwater 100 feet, sheet-piling its northern face, and extending the short pier on the northern side of the mouth.

In 1891-2, the rush of water during the freshets, having begun to undermine the work, the sum of $450 was expended in close-piling a portion of the river face, and in levelling up and repairing the top, which was leaning over the stream. In 1899-1900, the sum of $732.35 was expended in rebuilding the whole top of the work for a height of from 3 to 5 feet. In 1900-1, an expenditure of $1,080.04 was made in extending the breakwater by the addition of a new block, 30 feet long, 25 feet wide and an average height of 19 feet. The older portion of the work was also repaired.

In 1901-2, the sum of $2,097.46 was expended in further improvements and repairs. The work done consists of :

(*a*) A new block on the outer end of the south breakwater, 50 feet long, 25 feet wide and from 16 to 17 feet high, founded on 24 piles driven to hard bottom and cut off a foot below the level of the beach. The block is built of round-log cribwork, well fendered, ballasted and covered with 3-inch plank.

(*b*) A new block on the outer end of the north breakwater, 22 feet long, 18 feet wide and 14 feet high, substantially built of the usual type of round-log cribwork.

(*c*) Minor repair, chiefly under-pinning the shore end of the northern breakwater, where it had been slightly undermined by unusual freshets, in the brook issuing alongside the work.

In 1906-7, the sum of $99.49 was expended in under-pinning with stone and timber, the north or landward face of the breakwater, in order to keep it from falling into the stream and schooner berth alongside.

BLUE ROCK.

Blue Rock, Antigonish county, is situated on the southern coast of St. George's bay, about two and a half miles to the eastward of the entrance into Tracadie harbour, and six miles to the westward of the northern entrance into the Strait of Canso.

A breakwater extending 316 feet in a southwesterly direction from Blue Cape, for the protection of a boat landing and to afford shelter for fishing boats, was commenced by the department in 1886 and completed in 1889. It is from 16½ to 17 feet in width on top, with a face on the seaward side sloping 1 to 1 from the top of the work to 1 foot above high water. The depth at the outer end, at extreme low water, is 12 feet, and over the area sheltered from the north and east from 11 to 5 feet. Spring tides rise 4 feet.

Repairs and improvements were made in 1893-4-5 and in 1899-1900-1, including close-fendering the outer end and the sloping face; reconstructing the top work over a distance of 60 feet from the outer end inwards; and placing a stone talus on the seaward side, at the outer end, and on the inner side for a distance of 40 feet from the outer end inwards.

During the fiscal period of nine months ended March 31, 1907, the sum of $497.61 was expended in renewing the top work of the breakwater over 80 feet, from 60 feet from the inner end outwards, and in placing stone in the talus on the seaward side.

BOISDALE.

Boisdale, Cape Breton county, is on the southeast side of St. Andrew's channel, an arm of the Little Bras d'Or lake, about fifteen miles northeast of Grand Narrows.

A contract was entered into in March, 1906, for the construction of a block and span wharf, with creosoted substructure, extending to 11 feet at low, or to 12½ feet at high lake level, for the sum of $4,995.

During the fiscal year of nine months ended March 31, 1907, all the native timber and stone and part of the creosoted timber required, were delivered, the cribwork abutment was completed, and the substructure of the first block was placed and ballasted. Expenditure during fiscal year of 1906-7, $995-41.

BRETON COVE.

Breton Cove, Victoria county, is situated on the northeastern shore of the island of Cape Breton, about midway between St. Ann's harbour and Ingonish bay.

On July 18, 1904, a contract was entered into in the sum of $5,885, for the construction of a wharf to serve the purposes of a boat landing, and to afford shelter for fishing boats; the work was completed on July 22, 1905.

The wharf is a continuous cribwork with creosoted timber substructure, extending to 4 feet at low water, 194 feet in length and 16 feet wide, with an 'L' on the western side of the outer end, 24 by 20 feet, and an incline landing, built on creosoted timber piles, 4 feet wide and 46 feet long, on the inner face, inside of the 'L.'

The wharf is about half a mile from the public highway, and is reached by a right of way to the beach, which has been open to the public for years. This right of way crosses two properties. During 1905-6, the department fenced in the right of way on the property near the wharf, and during 1906-7, the sum of $80 was expended in fencing in the balance of the right of way, about 1,440 feet in length.

BRIDGEWATER.

Bridgewater (La Have river), Lunenburg county, is the centre and headquarters of a large and important business in the manufacture and export of lumber. It is a thriving town of 2,000 to 2,500 people, situated twelve miles from the mouth of the La Have river. It is 100 miles southwest from Halifax by the coast, and fourteen miles due west from the town of Lunenburg. It is the headquarters of the Halifax and Southwestern Railway.

During the year 1905-6 the sum of $1,568.52 was expended by the department in removing, by means of submarine divers, a large number of boulders and snags from the bed of the river, which had been for many years a serious menace to the shipping of the place.

In 1906-7, the sum of $3,063.38 was expended in continuing the work.

Spring tides rise 6 feet; neaps, 5 feet.

BROAD COVE MARSH.

Broad Cove Marsh, Inverness county, is on the Gulf of St. Lawrence, twelve miles south from Margaree harbour.

The wharf at this place, on its completion in 1888, extended 400 feet to 12 feet 10 inches at extreme low water. It was badly damaged in January, 1894, and subsequently carried away to within 207 feet of the inner end. In 1894-5-6, the inner 207 feet was repaired and strengthened, and in 1897-8, a small amount was expended in repairs.

When repairs were undertaken in 1904-5, only 100 feet of the work remained; during that year, the sum of $999.85 was expended in extending it, 25 feet to 2 feet at extreme low water. In 1905-6, the sum of $3,699.99 was expended in completing a further extension, 98 feet in length, with the exception of close fendering between fenders, on the seaward side, 18 to 55 feet from the outer end, at the outer end and on the inner side, 27 to 56 feet from the outer end.

The depth, at extreme low water, at the outer end of the 98 foot extension, is 7 feet. Spring tides rise 4½ feet.

During the fiscal year ended March 31, 1907, the sum of $350.88 was expended in completing the close-fendering of the 98 foot extension.

CANADA CREEK.

Canada Creek, King's county, also called Black Rock, is a fishing and farming village of about 150 people on the south shore of the Bay of Fundy, sixty miles east of Digby Gut and eight miles west of Halls Harbour. The harbour is formed by two piers or breakwaters, built one on either side of a small stream. That on the east side which is detached from the shore serves merely as a breakwater and was built by the department in 1878-9, at a cost of $3,000. It is 150 feet long, 25 feet wide on top, and from 12 to 15 feet high, substantially built of round-log cribwork, close faced, well ballasted and fendered. The breakwater on the western side, originally 248 feet long, which serves both as a breakwater and a landing pier, was built before Confederation at the joint expense of the inhabitants and the provincial government. It is built of round-log cribwork, the seaward side being protected by close sheathing of flatted spars. In 1874, it was extensively repaired at a cost of $2,500. In 1884, further repairs were made, and a new block 57 feet long, by 10 wide, was built on the seawardside of the shore end. In the winter of 1889-90, the outer 100 feet in length was completely wrecked, and other minor damage caused by severe gales. The shortening of the structure caused the gravel to wash around its end and fill up the berth for vessels in the bed of the stream along the eastern side. In 1892-3, the department built a new block of cribwork on the outer end of the old work, 50 feet long, 14 feet wide on top and from 8 to 11 feet high between the outer end of the existing work and the remains of the old. The block was totally destroyed in November, 1899. In 1900-1, an expenditure of $1,928.09 was made in reparing the work and in building a new block, 34 feet long, 30 feet wide, and, at the outer end, 28 feet in extreme height.

In 1901-2, the sum of $1,205.18 was expended in completing the new block, in extending the main breakwater, begun the previous year, and in taking down and rebuilding a length of 60 feet of the retaining wall on the east side of the mouth of the creek, this piece of work being of an average height of 10 feet and width of about 12 feet.

In 1902-3, the sum of $499.96 was expended in thorough repairs to the outer end of the eastern breakwater, which was in a dilapidated condition and endangering the whole structure.

Total expenditure to June 30, 1903, including refund of $550 to the provincial government was $13,519.02.

In 1906-7, the sum of $750 was expended in repairs, consisting of a piece or patch of new cribwork to fill a breach in the seaward face of the breakwater, 33 feet long, 20 to 25 feet wide and 10 feet high.

This work was transferred to the control of the Department of Marine and Fisheries on June 12, 1888.

CANNING.

Canning, King's county, is a prosperous village of about 1,500 people, mostly engaged in farming and fruit-raising, situated on the north or left bank of the Habitant river, which, about two and a half miles below, debouches into the Basin of Minas, It is an important station on the Kingsport branch of the Dominion Atlantic railway, which connects with the main line at Kentville, eleven miles to the south.

In 1904-5, the sum of $14,137.08 was expended in the construction of the wharf. It consists of a piece of cribwork 260 feet long, with an ell or return 90 feet long, 22 feet high and 22 feet wide on top. The back batters 3 inches to the foot and the front 1 inch to the foot. The whole block is founded on piles, driven to rock and cut off

level with the mud. The cribwork at the end of June was 17 feet high or within 5 feet of the full height.

The excavation of the berth in front, and the filling up behind were not completed at the end of the fiscal year.

In 1906-7, the sum of $8,640.59 was expended in continuing the work, which, at the close of the fiscal year, was nearly completed.

Spring tides rise over 40 feet.

CHARLO'S COVE.

Charlo's Cove, Guysborough county, marked on the charts 'Charlo's Harbour,' is on the northern shore of Tor bay, a bay on the Atlantic coast of Nova Scotia to the westward of Whitehaven.

On October 27, a contract was entered into for the construction of a breakwater on the northern side of the entrance to the cove, for the sum of $12,875.

The contract is for a breakwater 16 feet in width on top, extending 484 feet to 4½ feet at extreme low water, of round native timber cribwork, fully ballasted and protected on the seaward side by close-fendering and by a talus of heavy quarried stone or boulders, sloping 3 to 1 from extreme high water. Spring tides rise 6½ feet.

Up to March 31, 1907, no action had been taken other than in the way of arranging for the delivery of materials.

Expenditure during fiscal year 1906-7, $251.79.

CHETICAMP HARBOUR.

Cheticamp harbour, Inverness county, is on the west coast of Cape Breton island, fourteen miles to the northward of Margaree harbour.

The harbour is formed by Cheticamp island, and a beach of sand and shingle between its southern extremity and the mainland; and is entered, from the north, by a channel dredged through a bar over which there was originally about 4½ feet at extreme low water.

Of the $1,000 appropriated for expenditure in 1905-6, towards the construction of a work to prevent the movement inwards, of a beach on the mainland opposite the inner end of the dredged channel, and the consequent shoaling of part of the harbour and wharf property, the sum of $984.25 was expended in constructing 254 feet of brush and stonework, averaging 22 feet in width and 7 feet in height and containing about 1,400 cubic yards.

Of the amount appropriated for the fiscal year ended March 31, 1907, the sum of $5,052.33 was expended in constructing 3,600 cubic yards of brush and stonework, including an extension 370 feet in length ; two 'spurs,' and in procuring materials for cribwork blocks at the outer ends of proposed extensions of the 'spurs.'

CHURCH POINT.

Church Point, Digby county, is situated on the southeast side of St. Mary's bay, six miles southwest from Weymouth. It has a population of 200 people, engaged in farming and fishing.

The work consists of a wharf, a retaining wall and a breakwater, appears to have been built between the years 1855 and 1856, at the joint expense of the inhabitants and the provincial government, the expenditure of the government having been $61,055.66. In 1875-6, the department expended the sum of $2,000, the inhabitants contributing an equal amount, in repairing the northern and in rebuilding an ell 72 feet long by 20 feet wide, at right angles to it, with the object of preventing gravel from working around the outer end. The movement of the gravel, which is from south to north, has always been more or less a difficulty and a detriment to the port.

In 1890-1, the gravel having worked around the outer end of the breakwater and formed a bar across the entrance to the loading berth, a small groyne, 40 feet long and 24 feet wide was built, projecting at right angles from the outer or northwest corner of the breakwater. The groyne was extended in 1894-5 a further distance of 30 feet, and in 1896-7 by a length of 120 feet and a width of 16 to 25 feet, by a height of 10 to 20 feet, all of round-log cribwork. The sluice gates, at the head of the dock, where the fresh water makes its exit, were rebuilt in order to cause the stream to scour away the gravel from alongside the wharf front.

In 1900-1, the sum of $800 was expended in rebuilding 63 feet in length of the wharf front, 16 feet high, from 10 to 20 feet wide, 35 feet of this length being close-piled.

The sluice way was entirely rebuilt and fitted with double lifting gates instead of single; the floor of the sluice was lowered 5 feet, and an apron extending 13 feet up stream and 50 feet down stream, was constructed of 3-inch plank, well spiked to heavy stringers, bedded in close-packed stone and close-piled at both ends to prevent scour.

In 1902-3, the sum of $1,800 was expended in rebuilding 134 feet in length of the wharf wall.

In 1903-4, the sum of $2,995.21 was expended in further reconstruction of the wharf wall begun in 1902-3.

In 1904-5, the sum of $2,100 was expended in taking down and rebuilding a piece of the wharf wall, 100 feet long, 10 to 22 feet high, and from 10 to 18 feet wide, in the continuation and completion of the work done the previous two seasons.

In 1905-6, the sum of $1,200 was expended in extending westwardly the groyne which prevents the gravel from entering the schooner berth. The new block is 62 feet long, 25½ feet wide and 8 feet high, or within 15 feet of the height of the rest of the work.

In 1906-7, the sum of $1,793.12 was expended in constructing two new blocks of cribwork, the first 60 feet long and 25 feet wide and 10 feet high, to raise the groyne on the west side; the second, 90 feet long, 13 feet wide, 11 feet high, being a reinforcing block on the north side of the main north wall, which was canting over under pressure of the accumulated gravel behind it.

COUNTRY HARBOUR.

Country Harbour, Guysborough county, is on the Atlantic coast of Nova Scotia, thirty-six miles to the westward of Cape Canso. It has an excellent land locked anchorage, in 4½ to 7 fathoms, 4 miles inland and is navigable for large vessels, 6½, and for small vessels to Narrows Point, 8½ miles inland. Boats can ascend the river to the head of tide, two mile above Narrows Point.

A small amount ($140.66) was expended in June, 1905, in procuring materials and plant and in making preparations for carrying on the work of removing obstructions.

In 1905-6, the sum of $2,199.97 was expended in excavating a channel through a reef at 'Hell Gate,' and in removing most of the boulders obstructing the channel below that point.

During the fiscal year ended March 31, the sum of $699.99 was expended in completing the removal of boulders below, and in removing obstructions (sunken logs) in the channel above 'Hell Gate.'

COW BAY (PORT MORIEN).

Cow Bay, (Port Morien), Cape Breton county, is on the eastern coast of Cape Breton island, about twelve miles to the eastward of the entrance to Sydney harbour.

A breakwater built by the owners of the Gowrie coal mine, on the north side of the bay, came under the charge of the department in 1873. It originally extended 1,374 feet to 17 feet at low water, or to 23 feet at high water, and was about 44 feet in width. The area of the basin inclosed between it and the shipping pier of the Gowrie

mine, now the property of the Dominion Coal Co., was 17 acres, 10 acres of which had a depth of from 9 to 17 feet at low water.

The breakwater was seriously damaged during the great gale of August 24, 1873 Extensive repairs and improvements were made nearly every year up to 1895 when it consisted of 220 feet of old work protected on the seaward side by a beach of shingle and boulders; 360 feet of old work, 44 feet in width with a new inner face-work, and a break on the seaward side built over the remains of the old work; and 793 feet of inner work with counterforts and connecting outer face-works. The inner and outer face-works were from 30 to 20 feet apart; they were connected by tie walls and the spaces were filled with earth and stone.

In 1895 and 1896, 253 feet of the breakwater, (1,121 feet from the shore end outward) was destroyed; the outer face-works from 1,121 feet from the shore end inward, were badly damaged and ballast was carried over the work and deposited in the dock along the inner face from 557 feet to 1,121 feet from the shore end.

Large expenditures have been made every year since 1897 in repairing and strengthening the breakwater from 1,121 feet from the shore end inward. The outer works have been reconstructed and strengthened by filling the face-chambers with concrete and by close-piling, and the stringers and covering of the inner work from 557 feet to 1,121 feet from the shore end have been renewed.

In 1905-6, the sum of $16,956.84 was expended in repairing and strengthening the outer face-works.

During the fiscal year ended March 31, 1907, the sum of $8,447.57 was expended in completing the reconstruction of 350 feet of inner face-work, in progress in 1905-6; in general repairs, including concreting and close-piling the outer face-work; in renewing the close-piling of 300 feet of inner face-work, from 557 feet from the inner end outwards; and in placing large concrete blocks against the outer face, two averaging 14 feet by 10 feet by 10 feet deep, at the junction of the southern face of the inner counterfort, and 3 averaging 13 feet by 5 feet by 8 feet deep, 400 to 439 from the inner end.

CRIBBIN'S POINT.

Cribbin's Point, Antigonish county, is on the west side of St. George's Bay, eight miles to the southward of Cape George, and 5 miles to the northward of the entrance to Antigonish harbour.

The wharf, completed in 1892-3, extended 300 feet in a southerly direction from the point, and has an approach, 195 feet in length. It is 20 feet in width for a distance of 120 feet from the inner end, and 30 feet for the remaining 180 feet; the inner 50 feet of the work is built of stone, and the outer 250 feet, of close-faced native timber cribwork, fully ballasted.

The face-timbers having become weakened by the ravages of the teredo, during 1896-7-8-9, the outer end, the seaward face for a distance of 20 feet, and the inside face for a distance of 10 feet, from the outer end, were close-piled with creosoted timber; a talus of quarried stone was placed along the seaward face; the work was reballasted where necessary, and a 'timber-break,' 100 feet in length and 2½ feet in height, above the cap-timber, was placed on the seaward side of the inner end of the wharf, to prevent the sand outside from being washed on to the work, during storms.

During 1899-1900, the sum of $1,000 was expended in obtaining a portion of the creosoted timber required in the construction of a proposed extension of the wharf.

During the year 1900-1, the sum of $3,079.98 was expended in procuring the balance of the timber required for the extension, and in repairing the outer end of the old work, which was almost destroyed during the severe gales in the autumn of 1900.

As the sand at the end of the wharf, at which there were originally 11 feet of water, at low water, had made up to a height of about 6 feet, since its completion, leaving but 5 feet of water, at low water, and as it was necessary to found the exten-

sion on the original bottom, the dredge *George Mackenzie* was engaged from May 30 to July 12, 1901, in dredging out the foundation for the new work, and the approaches thereto, at a cost of $1,604.44.

During the year 1901-2, the sum of $2,896.31 was expended in the construction of the extension to the wharf, for which the materials were procured during 1899-1900-1. The new block is 48 feet long and 20 feet wide, and it has been placed across the end of the wharf, forming an 'L,' 18 feet in length, intended to retain the stone in the talus. The block is of an average height of 20 feet, and is constructed of round timber cribwork, laid open-faced, with creosoted timber in the substructure, close-sheathed on all outer faces, and filled in solidly with ballast.

During the year 1904-5, the sum of $2,127.41 was expended in close-sheathing the whole of the inner face of the old work, &c.

During 1906-7, the sheathing on the seaward face of the old work was renewed; floor-stringers, covering and cap were renewed where necessary, and the work was reballasted in places, at a cost of $941.21.

DELAP'S COVE.

Delap's Cove, Annapolis county, is situated on the south shore of the Bay of Fundy, twelve miles to the eastward of Digby Gut.

The breakwater is constructed immediately to the eastward of the mouth of a small pond, which affords safe shelter for fishing boats, and a convenient place for keeping small vessels during the stormy winter months. The breakwater itself affords a good landing place for coasters and small schooners, the pier breaking off all eastern storms, and the formation of the shore on the opposite side of the stream forming a natural breakwater.

This breakwater was built by the department in 1878-9. It is 150 feet long, 25 feet 3 inches wide, and is constructed of round timber, with square timber faces, its easterly side being sheathed with 8-inch timber. It is provided with a break 4 feet 6 inches high, along its seaward or easterly side, and its covering is of 6-inch plank.

In 1899-1900, the sum of $1,000 was expended in protecting the entrance to the face, and depositing large stones along it, to prevent the gravel from washing away.

In 1889-1900, the sum of $1,000 was expended in protecting the entrance to the pond and in placing an anchor and buoy off the outer end of the pier to enable vessels to warp out and proceed to sea, avoiding the danger of going ashore on the western headland, to which they were formerly exposed.

The opening into the pond was protected by extending the western face of the pier 100 feet inwards along the margin of the stream, or to where this latter opens into the pond, and in raising the break on the seaward side of the pier, to prevent stone and gravel from being thrown over the sea wall. The wharfing along the stream is of an average height of about 16 feet, and 12 feet wide; the entrance to the pond is now clear and unobstructed.

The warping anchor is a large rock placed in position and fitted with chains and tackles. During the summer months it has a spar buoy attached, which is removed in winter to avoid the danger of drifting ice. During the year 1901-2, the sum of $400 was expended in repairs to the breakwater. The work done consists of the renewal of the greater part of the covering, 200 feet of new stringers, 9 new mooring posts, 13 fenders, 118 feet of guard timbers, 200 tons ballast, besides petty and miscellaneous repairs to the break and the outer end of the work.

In the fiscal year 1905-6, the sum of $1,127.12 was expended in building an extension to the breakwater, 33 feet long, 25 to 28 feet wide and 21 feet high. At the close of the fiscal year, the work was not quite completed, owing to the delay in procuring labour and materials.

In 1906-7, the sum of $829.15 was expended in building the new extension and in miscellaneous and general repairs to the breakwater.

Spring tide rises 30 feet.

DIGBY.

Digby, Digby county, is the shire town of the county with a population of about 1,500, beautifully situated on the southwestern end of Annapolis basin. It is an important station on the Dominion and Atlantic Railway, 67 miles north of Yarmouth, 150 miles from Halifax, 20 miles from Annapolis. It is also the port of call for the daily steamer of the Dominion Atlantic Railway plying between Digby and St. John. The harbour is open at all seasons and well protected from nearly all quarters; storms, however, from the north and northeast drive a heavy sea against the pier, and if, at such times, there be much drift ice in the basin, the structure is likely to suffer damage.

The first pier was built by the government of Nova Scotia some years before Confederation, and was nearly destroyed by the gale which swept the Bay of Fundy in 1866-7. In 1869, to aid in rebuilding the work, the sum of $2,920 was granted by Parliament and transferred, to be expended by the provincial government. The work, as then built, was of pile-bents, 12 feet apart for 550 feet; next a block of cribwork 80 feet long, 45 feet wide, the southern half of which sloped so as to form an incline, rendered necessary by the great rise and fall of the tide (24 feet at springs). The incline was finished by a block 170 feet long by 22 feet wide, the northern half of this portion of the pier being all pile-bents, 8 feet apart. The outer end of the pier consisted of a block, 56 feet long, 45 feet wide, and about 40 feet high. The whole of the northern face was close-piled, the total length of the structure being 870 feet.

In 1872, the sum of $1,650 was expended by the department in completing and repairing the pier.

Works of improvement and repair were executed in 1874, 1882, 1885, 1887, 1888 and 1891.

In 1890, a contract was entered into for the construction of a landing pier on a new site, namely, on the north side of the 'Racquet,' about a mile to the northward of the present pier, and the town of Digby. For this purpose a quantity of timber and iron had been secured by the contractor. Owing, however, to numerous delays and the death of the contractor, the intention of building this pier was abandoned, and it was decided instead to repair and reconstruct the present pier, utilizing as much as possible the timber and iron belonging to the estate of the deceased contractor. The work of reconstruction was carried out by day labour at a cost of $15,248.15.

In April, 1894, a length of 330 feet of close-piling along the north end of the pier, together with the caps and walings for the same distance, and about 90 of the outside bearing and fender piles were destroyed by a violent gale. In order to save the rest of the structure from the scouring action of the under-tow set up by the sheet piling, the rest of it was immediately cut out, and the sheet piling and other timber, that had been knocked adrift, was saved and piled on the inner wharf. Subsequently, in May and June, 1894, the sum of $1,410.03 was expended in making good the damage done by the April storm. The sheet piling, however, having proved a mistake, was not replaced. About 90 new heavy piles were driven and thoroughly braced and bolted.

Further repairs and improvements were made in 1896-7-9, 1901-2-4-5 and 1906.

In 1906-7, the sum of $1,363.11 was expended in renewing a considerable quantity of the 6-inch flooring of the pier and in other miscellaneous repairs.

The work was transferred to the control of the Department of Marine and Fisheries on June 12, 1888.

Spring tides rise 24 feet; neaps, about 20 feet.

DRUM HEAD.

Drum Head, Guysborough county, is on the south or Atlantic coast of Nova Scotia, about two miles to the eastward of the entrance to Isaac's Harbour.

A breakwater, commenced in 1902-3 and completed in 1903-4, extended 330 feet, in from 1½ to 2 feet at extreme low water. It is of cribwork fully ballasted and pro-

tected on the seaward side by close-fendering and by a stone talus sloping 3 to 1 from high water.

The appropriation for 1905-6 was for extending the breakwater to 10 feet at low water, to afford additional shelter for fishing boats and a landing place for coastal steamers. A contract was entered into in April, 1906, for the construction of an extension, 149 feet in length and varying in width from 16 feet at the inner end to 20 feet at the outer end, with an 'L', at the outer end, 30 by 20 feet, forming a 'head', 50 feet in length, of cribwork fully ballasted, close-fendered on the seaward side and at the outer end, and protected on the seaward side to within 60 feet of the outer end. Up to the end of the fiscal year, work of construction had not been commenced.

During the fiscal year ended March 31, 1907, the work under contract was completed and the sum of $316.60 was expended in constructing a small warehouse, at the inner end of the breakwater.

Total expenditure during 1906-7, $5,896.60.

ESKASONI.

Eskasoni, Cape Breton county, is situated on the northern side of East bay, the eastern arm of Great Bras d'Or lake, about seven miles from Benacadie Point, at the entrance to and nine miles from the head of the bay.

The harbour, formed by outlying islands and connecting beach, is large, has a good depth of water, and is perfectly safe.

On March 8, 1906, a contract was entered into, in the sum of $2,875 for the construction of a wharf off Brown's shore. The work under contract will extend to 12 feet at low water, and be 168 feet in length and 20 feet wide, with an 'L' at the outer end, 20 by 20 feet; with the exception of a short cribwork abutment, it will be constructed on creosoted timber piles.

Owing to the non-delivery of the creosoted timber required, the work had not been commenced by the end of March, 1907, but the necessary native timber required had been delivered.

FORT LAWRENCE.

This is now known as Amherst Harbour and is situated about 2½ miles from Amherst town, at the head of Chignecto bay, near the mouth of the La Planche river. The town of Amherst is probably the most important, prosperous and thriving industrial town in Nova Scotia, and, as it is a manufacturing centre of some magnitude, it can readily be seen that efficient water transportation is essential to its future growth. Four years ago, the department constructed a large pile wharf at this place, but not over two years had elapsed from the date of its completion before the Intercolonial Railway built a siding to it.

The wharf consists of a stem, 249 feet in length and 36 feet wide on top. The stem runs from the dyke to the edge of the channel of the river, at which latter place it is 44 feet in height; the wharf proper then begins at the outer end of this stem and runs seaward following the inner edge of the channel and has a height on the seaward side of 44 feet and on the inner side of 28 feet. It is constructed of pile trestle bents, separate from each other 8 feet between centres of piles, whilst the piles in the bents are separate from each other 7 feet between centres. These are braced not only with cross bracing, but with braced piles carefully driven and fastened to the heads of the outside bearing piles. The whole work is fendered with double fenders of a large size. There are also two strips of longitudinal walings. All the top timbers are 12 by 12 inches, with the exception of the covering which consists of timber 5 inches in thickness, fastened to the floor stringers by bolts of ⅞-inch iron, 14 inches long.

In order to improve the docking facilities, the sum of $3,000 was granted, of which amount we expended $2,935.41. The ice, which is very heavy at this place had torn away a large number of braces, and had broken about 20 piles, which we had to re-

place, besides that, we constructed two beds for vessels to lie in, and widened the inside corner of the wharf so as to afford accommodation for two railway tracks and hoisting apparatus.

Spring tides rise from 40 to 41 feet and neaps from 33 to 34 feet.

FRUDE'S POINT.

Frude's Point is situated about three and a half miles northeast of Lockport town. Four years ago, a small wharf of block and span was constructed by the department; two years ago, the Halifax and Southwestern Railway Company decided to bring their line near the wharf and locate what is now known as Lockport station within 250 yards of it.

As the people of Lockport and its business interests could best be served from this locality, they asked for an enlargement of this wharf. The former wharf was thereupon doubled in width and extended an additional 200 feet, at a cost of $6,500, of which $1,503.66 was expended during the last fiscal year.

The wharf is 40 feet wide and has from 16 to 21 feet of water along the outside 265 feet. It has one railway track now on it, and it is proposed to lay two more tracks in the fall of 1907.

There yet remains about 65 feet of this work to be constructed and about 125 feet in length of the rest of the extension is about one-half completed. We have at the site of the work nearly sufficient material to complete this work.

Spring tides rise here 6½ feet, and neaps 5 feet.

GABARUS HARBOUR.

Gabarus harbour, Cape Breton county, on the eastern side and near the head of Gabarus bay, is of limited area, but of great value to the fishermen.

Expenditures were made in 1873-4 and in 1880-1, in deepening the entrance, through rock to about 1 foot at extreme low water.

In 1904-5, the sum of $1,584.91 was expended in opening a new channel through rock, clay and boulders, 25 feet in width and from 2 to 3½ feet in depth at low water, to the westward of the former entrance, with the intention of obtaining ultimately a uniform depth of 3½ feet and a width, at the bottom, of 30 feet.

In 1905-6, $2,489.05 of the appropriation and $471.72 out of the general appropriation, or in all $2,960.77 was expended, $694.25 in completing the new channel and $2,666.52 in the construction of part of a proposed brush and stone retaining wall, within the harbour, to prevent shoaling by sand carried across an extensive beach forming its eastern side. The work performed included opening a trench 342 feet in length, 15 feet width at bottom and 5 feet in average height (extreme low water to extreme high water level), and constructing in it a work of brush and stone 12 feet wide on top and 6½ feet in average height (extreme low water to 1½ feet above extreme high water).

During the fiscal year ended March 31, 1907, the sum of $566.56 was expended in extending the brush and stone work 78 feet, and in raising it to an average height of 3½ feet above extreme high water.

GEORGEVILLE.

Georgeville, Antigonish county, is on the southern shore of Northumberland strait, six and a half miles southwest from Cape George.

In 1892-3 a wharf, 207 feet in length and 20 feet wide, with an 'L' 20 by 20 feet, on the western side of the outer end, was constructed, to afford the inhabitants shipping and landing facilities. During 1896-7-8, an extension 44 feet in length, 40 feet wide, with an 'L,' 20 by 24 feet, was added thereto. The inner end of the wharf, for a distance of 87 feet, was of stone, covered with plank, and the remainder of the work, of squared timber cribwork, protected by fenders and close-sheathing.

During the severe northwest gale of September 12, 1900, which caused so much damage in the Gulf of St. Lawrence, the woodwork on the stone approach was partly lifted by the sea and moved several feet, and the sum of $291.23 was expended in putting it back into position; but as shortly after it was again disturbed by the sea, during 1901-2, the sum of $699.47 was expended in the removal of the woodwork on top of the stone approach; the stone wall under it was taken down to a depth of 4 feet and in its place cribwork was substituted, fully ballasted and covered with the old plank, and the outer faces of both, cribwork and stone wall, were close-sheathed.

The sum of $2,500 was voted for expenditure during 1903-4 towards the construction of an extension to the wharf, and the amount was expended in procuring the necessary materials, during 1904-5, the extension, 50 feet long and 25 feet wide, was completed, at an expenditure of $2,000.

The sum of $3,600 was voted for expenditure during 1905-6 in the construction of a further extension to the wharf, 48 feet long and 24 feet wide, with an 'L' on the western side of the extension, 40 feet long, 24 feet wide, and for the improvement of the road connecting the wharf with the public road. The road was improved at a cost of $299.61 and the extension was completed, but owing to stormy weather and the loss of some materials, the 'L' could not be completed with the balance of the amount authorized, although most of the materials required for its construction had been obtained.

During the fiscal year ended March 31, 1907, the sum of $1,499.87 was expended in the completion of the 'L.'

GOOSE BAY.

Goose Bay, Yarmouth county, is situated on the west side of the neck of land or peninsula known as Tusket Wedge, about twelve miles southeast from the town of Yarmouth. The population of the district of Tusket Wedge, within a radius of about two miles, is about a thousand people, engaged in fishing and farming.

For the benefit of local trade, the department in 1905-6, expended the sum of $2,599.63 in constructing a public wharf of pilework, 290 feet long, 20 feet wide and about 16 feet high at the outer end.

The approach is a stone embankment 80 feet long and from 4 to 8 feet high. At the close of the fiscal year this work was not quite finished.

In 1906-7, the department expended the sum of $1,506.43 in completing the work.

GRAND NARROWS.

Grand Narrows, Cape Breton county, is on the south-eastern side of the Barra Strait, which connects the Great with the Little Bras d'Or lake.

The old wharf, near the station of the Intercolonial Railway and serving as a landing place for steamers with mails and passengers from Baddeck, was 287 feet in length, including 67 feet of cribwork filled with brush and stone and covered with gravel; 80 feet of pile-work built in 1885-6 by the department over the remains of an old landing pier, built by the provincial government; and an extension 140 feet in length, built by the department in 1883-84. The extension consisted of three blocks each 20 by 20 feet, and an outer block or head, 20 feet in line of work and 60 feet in length, with openings of about 16 feet.

In 1901-2 and 1902-3, $3,012.16 was expended in reconstructing the wharf, and in extending it 10 feet, with creosoted timber pile-work; the work being then 297 feet in length, 24 feet in width for a distance of 277 feet and 30 feet over the outer 20 feet, with a depth, at the outer end, at low lake level, of 11 feet.

In 1903-4 and 1904-5, $3,901.86 was expended in extending the wharf 57½ feet, to 15 feet at low lake level, and in the construction of an 'L,' 30 feet by 300 feet, on the southern side and at the outer end of the extension.

In 1905-6, the sum of $964.44 was expended, $900 for removing the remains of old cribwork, which projected beyond the southern face of the pile-work extension, and in

constructing a freight shed, 25 feet in length and 12 feet in width, and $64.44 for repairing and strengthening the southwest corner of the 'L,' which had been damaged by a steamer.

During the fiscal year ended March 31, 1907, the sum of $56.51 was expended in raising the roof of the warehouse to a proper pitch and in placing a flooring in the warehouse, over the covering of the wharf.

HALF ISLAND COVE.

Half Island Cove, Guysborough county, is situated on the southern shore of Chedabucto bay, about sixteen miles to the eastward of the town of Guysborough, and twelve miles to the westward of Canso harbour.

On January 6, 1906, a plan with specification for a breakwater off Hurst Island, at the mouth of the Cove, for the protection of the anchorage during the easterly gales, was submitted for approval, and on April 25, following, a contract for the construction, in the sum of $6,727 was entered into with Messrs. Suttis and Anderson.

The work under contract will extend to 9 feet at low water, and be 270 feet in length; with the exception of the approach, 30 feet in length, which is to be of stone, the structure is to consist of round native timber cribwork, close-sheathed on the seaward side and around the end, and protected from the action of the ice by a stone talus.

The necessary timber was ordered immediately after the signing of the contract, for delivery in the summer, but it was found on delivery that most of the timber was not up to the requirements of the specification; new materials had to be ordered, and as these have to be imported and cannot be delivered before the opening of navigation in the spring, the work under contract was not commenced, up to the end of the fiscal year ended March 31, 1907.

HALL'S HARBOUR.

Hall's Harbour, King's county, is situated on the south side of the Bay of Fundy, about sixty-five miles northeast of Digby Gut and twelve miles southwest of Scott's Bay; it is about twelve miles northwest from Kentville, the county town of King's, and the headquarters of the Dominion Atlantic Railway.

The harbour, though small, is one of the best at high water, between Scott's Bay and Digby Gut. Spring tides rise 39 feet, neaps, 33. The village has a population of about 20 families, and some years ago had a considerable shipping trade, which however, of late years, has dwindled to insignificant proportions.

About the year 1839, the inhabitants, aided by the provincial government, built timber retaining walls on both sides of the harbour, which consists of land-locked basin dry at low water, of about an acre in extent to permit vessels to lie alongside the public road. About 1844 an addition seawards to the wall, on the west side, was built, in order to prevent the accumulation of gravel at the mouth of the harbour, and to serve as a breakwater. About 1885, an addition of 100 feet in length was built at a cost of $2,000. In 1884, it was repaired by the department at a cost of $750. On November 6, 1884, the outer block was destroyed by a violent gale, the accompanying heavy seas having also the effect of depositing a bank of gravel which almost entirely obstructed the mouth of the harbour.

Between 1884 and 1891, the only expenditure made upon the work was the sum of $49.97 applied in sheathing the exposed and broken ends. Repairs and improvements were made in 1891, 1894, 1896, 1899, 1900 and 1905.

In 1905-6, the sum of $2,500 was expended in completing the dam and sluice, immediately above the public road approach, at the head of the little harbour, which was begun in 1904-5. The dam which is 220 feet long over all and has a maximum height of 18 feet is built of puddle of an excellent clay found in the immediate vici-

nity, mixed with from 15 to 25 per cent of fine beach gravel. The sluice-way which is about the middle of the length of the dam, is about 70 feet long, substantially built of squared timber, with an opening of 9 feet in width, containing two gates each, 4 feet 6 inches high, and 3 feet wide, operated by a pair of winches, situated on the floor of the sluice at the level of the roadway. The dam carries the public road, the ancient highway bridge immediately below being thoroughly dilapidated. This work has proved eminently successful in accomplishing the object of its construction, viz.: the scouring away of the gravel from alongside the breakwater wharf.

The breakwater was transferred to the control of the Department of Marine and Fisheries, June 12, 1888.

In 1906-7, the sum of $1,628.71 was expended in taking down and rebuilding a very dilapidated portion of the eastern or landward face of the breakwater, 72 feet long, 12 feet wide at bottom and from 22 to 24 feet wide at top and 24 feet high; also a second piece, 26 feet long, 12 feet wide and 8 feet high. The northeast corner of the breakwater was also underpinned with timber and stone to make up scour by the creek alongside.

Spring tides rise about 38 feet.

HAMPTON.

Hampton, formerly Chute's Cove, Annapolis county, is situated on the southeast side of the Bay of Fundy, twenty-seven miles northwest of Digby Gut, and six miles northwest of Bridgetown, an important station on the Dominion Atlantic Railway. It has a population of about 200 people, engaged in fishing, farming and the export of cordwood and timber.

In 1855 and 1856, a small pier, 165 feet long was built near the western side of the cove, the provincial government contributed $600 to its cost. The site was chosen by commissioners, apparently without professional advice and was objectionable on many accounts. At a cost of $3,000 in 1879, an addition of 121 feet was made by the department, and the older portion of the work was strengthened with the hope of remedying some of the defects of the location.

In 1881, on further examination, it was found that the original work had been badly undermined by the sea and that owing to the direction of the pier, the shingle was fast shoaling the water on the inside. It was therefore decided to rebuild the structure on another site, about half a mile to the eastward, which work was carried out at a cost of $2,300. The new pier, as then completed, was 246 feet long, more substantially built and much better situated than the old one, it being located immediately to the westward of a small brook, which serves to keep the schooner berth alongside free from sand.

Repairs and improvements were made in 1889, 1899, 1903-4 and 1905.

In 1906-7, the sum of $299.22 was expended in renewing about 100 feet in length of the floor, including stringers, the placing and bolting of a number of new fenders on the shoreward face, and the construction of a piece of low cribwork, 50 feet long at the head of the breakwater, to prevent the waves from washing away the public road.

Total expenditure to March 31, 1907, including refund to the provincial government of $1,538.10, is $12,863.79.

Spring tides rise 32 feet.

HILTZ NARROWS.

Hiltz Narrows, Lunenburg county, forms the entrance to a small cove, about 150 acres in extent, situated on the west side of Mahone Bay, six miles southwest from Chester and four miles northeast from the village of Mahone.

In 1875-6, the Nova Scotia government built a piece of cribwork wharfing, 270 feet long, 8 feet wide and with an average height of 7 feet, at a cost of $331.55, the

residents of the neighbourhood furnishing free labour. The object of the work is to enable boats to warp in at ebb, and out at flood tides, during which time there is a very strong current through the Narrows. Several small amounts have been spent by the department in making repairs.

The work having fallen into a dilapidated condition, the department in the fiscal year 1905-6 expended the sum of $1,000.04, in commencing a block of cribwork on the opposite side of the Narrows.

In 1906-7, the sum of $500 was expended in building a further length and completing the work. It is 150 feet long, 12 feet wide and from 8 to 10 feet high, substantially built of round-log cribwork, well ballasted.

Spring tides rise about 7 feet; neaps, 6 feet.

INDIAN HARBOUR.

Indian Harbour, Halifax county, is a small fishing village of between 200 and 300 people, situated twenty-nine miles west of Halifax, by public road, or about sixteen in an air line. It is on the east side of the mouth of St. Margaret's Bay, eight miles south of French Village.

In 1904-5, the sum of $1,066.16 was expended in constructing a pile-wharf for the convenience of local trade and fishing. The wharf is constructed of blocks and span, the blocks being of substantial crib work filled with stone and well fendered. It is 20 feet wide, with an 'L' at the outer end, giving a face length of 50 feet, along which the work is 17 feet high with a depth of water of 13 feet, at H. W. O. S. T. The approach to the wharf consists of an embankment of stone and earth, 150 feet long and from 3 to 5 feet high. At the end of the fiscal year the work was not quite completed.

During the fiscal year 1905-6, the work was completed, at a cost of $765.38.

In 1906-7, the sum of $399.99 was expended in blasting and removing a number of large boulders which obstructed the entrance of the harbour.

IONA (NEW WHARF).

Iona, Victoria county, is on the northern side of Barra strait, which connects the Great with the Little Bras d'Or lake; it is a station on Intercolonial Railway and a landing place for the steamer, which carries mails to and from Baddeck, and connects twice a-day with the express trains goins east and west.

The 'new wharf,' so called to distinguish it from the old one on the western side of the railway bridge, was constructed by the department in 1902, and extended during 1904. It is a block and span structure, 400 feet in length, 20 feet wide for a distance of 138 feet, and 30 feet wide for the remaining 262 feet; the blocks are constructed of round timber, creosoted to high lake level, and close-sheathed on the seaward faces and the outer end of the work. The wharf extends to 11 feet, at low water, and is connected with the railway station by a road, 350 feet in length.

All freight by rail from Baddeck, which is the distributing centre for the trade of the county of Victoria, is shipped via Iona and thence to its destination by steamer *Blue Hill*; for the accommodation of this freight, in 1905-6, the sum of $900 was expended in the construction of a warehouse, 40 feet long and 20 feet wide, resting on a creosoted timber pile foundation, on the southern side of the inner end of the wharf; the work was completed, except the laying of the second floor, the wainscoating and the outside painting.

During 1906-7, the sum of $100 was expended to complete the warehouse.

IONA (OLD WHARF).

The 'old wharf' at Iona, Victoria county, so called to distinguish it from the new wharf, on the eastern side of the railway bridge, was originally constructed by

the provincial government, but was acquired by the department, by which it was repaired, reconstructed and extended.

The work is 195 feet in length on the western face and consists of an approach, 129 feet long and 20 feet wide; of a span, 24 feet long, and of a 'head,' 42 feet wide at the western, and 22 feet on the eastern end, and 70 feet long on the channel face. The approach is constructed of close-faced, square timber cribwork, partly covered with gravel and partly planked over; the 'head' is built on creosoted timber piling.

During the year 1905-6, the sum of $100.31 was expended in repairs to the faces and top of the approach.

The sum of $500 was authorized for expenditure during 1906-7 for replacing native timber fender piles around the 'head,' which had been destroyed by the teredo, with creosoted timber piling, but owing to the non-delivery of the creosoted piling, the work could not be accomplished and no part of the amount authorized could be expended.

JANVRIN'S ISLAND.

Janvrin's Island, Richmond county, is a large island to the westward of Madame island, from which it is separated by Mousselier's passage.

The sum of $2,000 was voted for expenditure during 1904-5, towards the construction of a native timber block and span wharf, on the northern side of Janvrin's harbour, 195 feet in length and 16 feet wide, and extending to 8 feet at low water. In the autumn of 1904, all the cribwork blocks were built up to the required height ready for the floor stringers, except the outer block, which was built up to within 4 feet of the top.

The sum of $600 was voted for expenditure during 1905-6, to complete the work, but owing to heavy damage to the outer block by ice during the previous winter, the amount voted proved insufficient to finish it; the fendering, capping and the sheathing and stone ballasting still remained to be done.

During 1906-7, the sum of $299.99 was expended in placing the sheathing, the capping and the fenders, but it will require some ballasting before the work can be completed as specified.

JERSEY COVE.

Jersey or Eel Cove, is situated on the northeastern end of St. Ann's harbour, in the angle formed between the beach at its entrance and the mainland.

On October 21, 1906, a contract was entered into with Mr. Hugh McDonald, in the sum of $4,620 for the construction of a wharf, but up to the end of the fiscal year 1906-7, the work had not been commenced, but all the materials required were ordered for delivery in the spring.

The work under contract is a block and span wharf, with creosoted timber substructure and extending to 10 feet at low water, 183 feet long and 20 feet wide, with an 'L' on the northeastern side of the outer end, 10 feet long and 20 feet wide. It will be connected with the public road by an approach 105 feet long and 16 feet wide, consisting partly of block and span work, and partly of clay embankment and grading.

Total expenditure in 1906-7, $189.09.

JOGGINS MINES.

Joggins Mines is a town of about 1,600 people, situated on the shores of Chignecto bay, about fifteen miles southwest of Amherst. Its chief support is the industry of coal mining conducted at that place by the Canada Coals and Railway Company.

A breakwater was constructed by this department in 1887, at the foot of a bank some 75 feet in height, which breakwater is also used by the people generally as a wharf. This work has been repaired several times by the department. The people

had so much difficulty in getting to it, to either ship or receive their freight, that it was fast falling into absolute disuse, so that in the fiscal year 1905-6 we began the cutting of a road through this high bank, and during that year the sum of $2,999.81 was expended on the work, and during the last fiscal year the sum of $862.13 was expended in completing the same.

This road now enables the merchants and others to get their goods at any hour of the day they wish, whilst formerly they were compelled to go round by the shore and could only reach the wharf by this circuitous route at low tide. This road will no doubt need repairs from time to time, but they should not, if attended to in proper time, be of a very serious nature.

JUDIQUE (MCKAY'S POINT.)

Judique (McKay's Point), Inverness county, is on the east side of St. George's bay, ten miles south of Port Hood, and sixteen miles north of the northern entrance to the Strait of Canso.

The breakwater at McKay's Point, commenced in 1898 and finished in 1900, is 725 feet in length, 20 feet in width, with an 'L,' 20 by 20 feet at the outer end, of round timber, laid open-faced, with creosoted timber substructure, close-fendered round the outer end and the 'L,' and protected on the seaward side by a talus of stone. The depth, at extreme low water, at the outer end, is 6 feet. Spring tides rise 4 feet.

In 1902-3, the sum of $898.77 was expended in repairs. In 1903-4, the sum of $393.48 was expended in close-fendering 400 feet of the seaward face, from the 'L' inwards.

During the fiscal year ended March 31, 1907, the sum of $138.30 was expended in reconstructing the outer portion of the 'L,' and in placing quarried stone in the talus on the seaward side of the breakwater, near its junction with the 'L.'

KELLY'S COVE.

Kelly's Cove, Yarmouth county, lies about two and a half miles south of the present town of Yarmouth. Fifty to a hundred years ago, it was the harbour of the place, and round its shores was all that then constituted the town. At the present date, it is merely a shelter for about a dozen fishing boats, and there are but few houses in the immediate vicinity.

The present breakwater wharf, built before Confederation by the provincial government, is old and a good deal decayed, though the bottom timbers are still sound. It is 97 feet long, 23½ feet wide, and 15½ feet high, at the outer end, where at H.W.O.S.T. there is about 12 feet of water. The work is of ordinary round-log stone-filled cribwork and not floored. Immediately to the southwest of the wharf is a piece of cribwork, built to protect the beach, 118 feet long, 4 feet high and about 8 feet wide, and of which the 30 feet next the wharf has been destroyed by the waves.

During the year ended June 30, 1898, the sum of $299.72 was expended in partially rebuilding the top of the breakwater wharf, and in the renewal and repair of 100 feet in length of the beach protection work adjoining the wharf.

For the protection of the fishing fleet, the department, on March 27, 1906, awarded a contract in the sum of $7,700 for the construction of a new breakwater.

Work was begun about July 1, 1906, and finished in October, 1906. It is 281 feet long, 26 feet wide on top, and from 6 to 17 feet high, substantially built of round-log cribwork, close-sheathed on the seaward face. Spring tides rise 12 feet.

In 1906-7, the sum of $99.60 was expended in under-pinning the west or seaward face of the work, which was being undermined by the undertow set up by the breakwater itself.

Total expenditure in 1906-7, $7,147.10.

LA HAVE ISLANDS.

La Have islands (Crooked channel), Lunenburg county, off the coast of the southern part of the county of Lunenburg, opposite to, and to the southward of the mouth of the La Have river, are from thirty to forty islands, varying in size from a few square yards to about a square mile.

Most of the larger islands are inhabited, their aggregate population being some 200 or 300 people, engaged in fishing and farming. The islands are distant from the mainland from one-half to three miles, and they are all more or less connected with each other and to the mainland, by shallow banks and mud flats, covered at H.W.O.S.T., but bare or nearly so at low water. In and about the flats are numerous channels and deep holes, but boat navigation is intricate, and in many cases very circuitous.

The principal boat channel through the archipelago lies approximately east and west and is appropriately known by the name of 'Crooked channel,' its landward end being in Green bay, to the southward of the end of Petite Rivière beach, a long, narrow strip or bar of sand, projecting about a mile and a quarter from the main shore—it gave no direct or easy access to the village of West Dublin, lying about two miles to the northward.

To give the inhabitants of the larger islands, viz., Bushe's and Bell's, more direct communication with the village on the mainland, where they resort for a market, the department, in September and October, 1893, dug a boat channel, 2,300 feet long, 40 feet wide, and three to four feet deep at low water ordinary spring tides, in a northerly direction from the main crooked channel on the south, to deep water on the north between the extremity of the Petite Rivière beach and Bushe's island. The work was all done by hand, at low water, at a cost of $923.73.

In 1906-7, the sum of $1,097 was expended in re-opening 1,100 feet of this channel, from 18 to 20 feet wide and from three to four feet deep, which had filled up in the thirteen years since it was first dug.

L'ARDOISE.

L'Ardoise, Richmond county, is situated on the eastern side of St. Peter's bay, near its entrance from the Atlantic ocean, and about six miles to the eastward from the southern entrance to St. Peter's channel.

An isolated breakwater, built in 1876-7, off Martin's Point, in from 5 to 10 feet, at low water, and almost destroyed in 1883, was reconstructed during 1891-2-3.

The work consists of a timber core, 400 feet long and 20 feet wide placed over the remains of the original structure in from 1 to 4½ feet at low water; the whole being covered with stone, sloping 3 to 1 on the seaward side and outer end, and 2 to 1 on the inside and inner end. The whole surface of the work, above low water mark, was covered with stone of not less than 15 cubic feet each, and the spaces between the stones above the line of high water, were filled in with concrete.

Since the completion of the work, the covering stones, on the seaward side and outer end slopes, which had been disturbed by the sea, were replaced and a concrete wall 3 feet wide on top and 4½ feet in height, with top flush with the surface covering, has been constructed over the outer face and the ends of the cribwork core.

The breakwater averages 17½ feet in height, from the original bottom to the top of the stone covering, which is five feet above high water, and 10 feet above low water springs.

In order to stop the undertow from sweeping into the harbour, through the gap between the inner end of the breakwater and the shore to the eastward of it, a distance of 1,195 feet, on December 29, 1903, a contract was entered into for closing the gap. The work was commenced on July 1, 1904, and completed on August 12, 1905, and consists of a native round timber structure, 1,145 feet in length, and of stone embankment 50 feet long to connect the cribwork with the old work. The cribwork for a distance of 350 feet from its outer end is 20 feet wide on top, and protected by a stone talus on each

side; for a distance of 795 feet it is 16 feet wide on top, also protected by a stone talus on the seaward face. The stone embankment between the outer end of the cribwork and the old breakwater, is built with large quarried stone and is 16 feet wide on top, sloping 3 to 1 on the outer, and 2 to 1 on the inner side.

After the year 1900, when the breakwater was repaired, slight disturbances of the stone covering took place yearly until the winter of 1904-5, when during a very severe gale, the heavy seas threw large masses of ice onto and against the structure, dislodging the stone covering and cutting several gaps through the top; in 1905, the sum of $491.49 was expended in making temporary repairs.

The sum of $5,000 was voted for expenditure during 1906-7 for placing the breakwater in thorough repair, but owing to the shortness of the season and the exposed condition of the work, out of the amount voted, the sum of $3,868.21 only could be expended during the season; however, the work was left in a perfectly safe condition. The amount was expended in repairing the top, and in replacing the stone covering where necessary, down to low water, stones being bedded in concrete, and above the line of high water, the stones were carefully laid and the spaces between them were filled in solidly with concrete. At the outer end of the work, a concrete retaining wall, 24 feet long, 10 feet wide and of an average height of 6 feet, was constructed.

LARRY'S RIVER.

Larry's River, Guysborough county, is at the western extremity of Tor bay, a bay on the Atlantic coast of Nova Scotia, twenty-four miles to the westward of Canso harbour.

The harbour, a channel through flats improved by dredging, was formerly protected from the eastward by a beach and bar of shingle. Since 1896, the point of the beach at the northern extremity of the bar and the bar itself have been lowered and carried inward, toward the channel.

A contract entered into in September, 1902, for the construction of a breakwater to restore the shelter formerly afforded by the beach and bar, was completed in July, 1904. The breakwater consists of two sections of stone embankment respectively 125 and 379 feet in length, each 14 feet in width at a level of 2 feet above high water and 6 feet in average height, and a central section of cribwork 500 feet in length, 14 feet in width on top and 11½ feet in average height, protected on the seaward side by close-fendering and by a talus of stone sloping 2 to 1 from high water. The embankment and cribwork were finished at a height of 4 feet above extreme high water. Spring tides rise 6½ feet.

In 1904-5, the sum of $1,207.52 was expended in procuring all the materials with the exception of the stone and the cap-timbers (guard-rails) required in the construction of a 'spur' on the southwestern side and near the outer end of the breakwater, 125 feet in length including 20 feet of stone embankment, and 105 feet of cribwork, fully ballasted and close-fendered on the seaward side and at the outer end.

In 1905-6, the sum of $1,490.93 was expended in constructing about one-third of the embankment, and in completing the cribwork with the exception of procuring and placing the floor-stringers and cap-timbers and of placing the covering and part of the upper fenders and sheathing. In addition to the above, the sum of $99.32 was expended in repairing and protecting the stone embankment at the outer end of the breakwater.

During the fiscal year ended March 31, 1907, the sum of $793.51 was expended in completing the embankment and cribwork in progress in 1905-6, and in replacing some ballast washed out of the cribwork during the winter.

LITCHFIELD.

Litchfield, Annapolis county, is a fishing and farming settlement, with a population, within a radius of a mile, of about 150 people, situated on the south coast of the Bay of Fundy, fourteen miles northeast of Digby Gut.

In 1904-5, the sum of $3,000 was expended in constructing a breakwater for the protection of the fishing fleet. The work, which the appropriation did not suffice to completely finish, is 170 feet long, from 20 to 25 feet wide and from 8 to 15 feet high, substantially built of round-log cribwork, filled with stone and close-sheathed on the seaward side and outer end. The seaward side is provided with a break four feet six inches high.

In 1905-6, the sum of $999.30 was expended in completing the breakwater, nearly completed in 1904-5, and in under-pinning the shore end of the work, which had been undermined by an unusual freshet in the stream issuing alongside.

In 1906-7, the sum of $499.50 was expended in the purchase of timber for the further extension of the breakwater.

Spring tides rise about 30 feet.

LITTLE BROOK.

Little Brook, Digby county, is situated on the thickly-settled east shore of St. Mary's bay, Bay of Fundy, two and a half miles from Church Point, thirty-three miles south from Digby, the county town, and thirty-six miles north of Yarmouth.

Some years prior to confederation, a breakwater was built by the inhabitants, aided by the provincial government.

In 1873, four blocks of cribwork, in the middle of the breakwater, were partially destroyed by a gale, and the sum of $600 from the 'Provincial Navigation Securities' was expended in repairs.

In 1891-2, the sum of $100 was expended by the department in repairing the upper portion of the work, which was considerably damaged by an exceptionally high tide in the autumn of 1890. A piece 20 feet square by 5 deep was rebuilt, and 100 tons of additional ballast put in the work.

This breakwater was substantially built of stone-filled cribwork of the usual type. It is 400 feet long, 20 to 35 feet wide, and 20 feet high at the outer end, where there is an ell 40 feet long by 25 feet wide. It is much used during the summer months for shipment of piling, cordwood, lumber and timber, and small quantities of fish and the landing of general merchandise and supplies for local trade and consumption. Little or no use is made of it in winter, owing to the accumulation of ice. At H.W.O.S.T., there is a depth of 15 feet of water at the outer end. At low water the sand flats are many hundred feet beyond the breakwater.

In 1900-1, the sum of $279.32 was expended in repairs.

In 1904-5, the sum of $2,000.13 was expended in extending the breakwater by a new block 40 feet long, 31 feet wide, and from 20 to 30 feet high.

In 1905-6, the sum of $4,998.53 was expended in :

(*a*) Taking down and rebuilding a portion of the south side and outer end, 95 feet long, 10 feet wide and from 12 to 18 feet high.

(*b*) Taking down and removing an old block on the north side of the outer end, 35 feet long, 25 to 30 feet wide and 20 feet high, which was falling to pieces, and in constructing a further extension to the work.

(*c*) Constructing a re-enforcing block on the north side of the shore end of the work, 50 feet long, 10 feet wide, and from 10 to 12 feet high.

(*d*) Constructing an extension of the breakwater, 60 feet long, 31 feet wide, 20 to 22 feet high, with an 'L' to the north 30 feet long, 25 feet wide and 22 feet high.

The last item was not quite completed at the close of the fiscal year.

In 1906-7, the sum of $2,400 was expended in completing the extension begun in 1905-6, and making general repairs to the breakwater; the extension is 60 feet long, 31 feet wide, with an ell on the northern side, 30 by 28 feet; the work is from 20 to 21 feet high, and, at the outer end, carries about 17 feet of water at H.W.O.S.T. At L.W.O.S.T. there is no water within a couple of hundred yards of the end of the breakwater.

LIVERPOOL

Liverpool is a thriving town of some 3,000 people, situated at the mouth of the Mersey river. It is about seventy miles southwest of Halifax city. Fishing, shipbuilding, lumbering, pulp works, the supply of electrical power and other kindred industries are engaged in by these people.

The harbour is a barred one, and, in the fiscal year 1905-6, the sum of $2,998.02 was expended in removing rocks principally from this bar, there being 995 tons of stones then removed.

During the last fiscal year, the sum of $1,292.83 was expended in removing an additional amount of about 360 tons, making the cost per ton for the entire work about $3.17.

LIVINGSTON'S COVE.

Livingston's Cove, Antigonish county, is on the southeastern shore of Northumberland strait, about two miles southwest from Cape George.

For the purpose of affording shelter to the fishing boats of the district, and a landing place for steamers and small vessels, a pier, extending to 9 feet at low water, was commenced by the department in 1899 and completed in 1902.

The work is 312 feet in length, with a road approach, 105 feet in length, cut through the clay bank. The pier is a continuous structure and consists of a shore abutment with stone retaining walls, 30 feet long and 18 feet wide, and of a cribwork block 80 feet long and 19 feet wide, and of a cribwork extension, 202 feet in length and 24 feet wide, with an 'L' on the southern side of its outer end, 24 by 24 feet. The cribwork is constructed with native square timber in the faces, laid with 7 inch opening, and round timber ties, and is fully ballasted and fendered; the northern or seaward side, the outer end and the southern face of the 'L' were sheathed with hardwood.

Contrary to expectations, it was found that the teredo was injuring the work, particularly on the seaward face and end, and to prevent further damage, during 1903-4-5, a stone talus was placed along the seaward face to within 20 feet of the outer end and creosoted timber piling were driven at the end of the seaward face, on the outer end and around the 'L.'

During 1905-6, the sum of $1,000 was expended in raising the stone talus, in repairing the cribwork at its inner end and in protecting, temporarily, places on the inner face of the work, which showed signs of damage by the teredo, with native timber close-sheathing, driven into the sandy bottom.

The sum of $1,800 was voted for expenditure during 1906-7, to close-pile, with creosoted timber, the outer portion of the inner face of the work, for a distance of 120 feet, but as that timber could not be delivered during that fiscal period, out of the amount voted, the sum of $711.28 was expended in placing about 120 cubic yards of heavy stone in the talus, in repairing the outer corners, and in procuring and placing native timber waling on the inner face of the work, where the creosoted piling is to be driven.

Spring tides rise 4½ feet.

MCNAIR'S COVE.

McNair's Cove, Antigonish county, is on the west side of St. George's Bay, about two miles to the southward of Cape George.

A breakwater, 400 feet in length, and 20 feet in width was built on the north side of the cove during 1872-3-4, and in 1878 a length of 20 feet was added thereto. In 1879 the work was carried away by drift ice to within 100 feet of the shore end, down to from 3 to 6 feet below low water. During the summer of 1883, 70 feet of the shore end was rebuilt, and during the winter of 1884, the work was extended 94 feet,

but this extension was badly damaged by drift ice in April, 1885, and was subsequently carried away.

During 1886-7-8, the bottom of the damaged work was dredged out and a new work, 160 feet in length, 34 feet wide on top, with a sloping face on the seaward side, was constructed, and on its completion the total length of the breakwater was 330 feet.

The work was constructed entirely of native timber, and as it became weakened by the action of the teredo, during the years 1890-1-2-3-4, the outer end, on each side of it for a distance of 20 feet, was protected by creosoted timber close-piling, and its seaward face, by a talus of quarried stone.

During the years 1897-1901, the timber wall under the sloping face, which was destroyed by the teredo, was reconstructed down to low water and close-fendered with hardwood timber; the stone talus was raised up to the top of the close-fendering, and the work was reballasted and recovered where necessary.

During 1901-2-3, the inner end of the work which was constructed partly in 1872 and partly in 1883, and was only 20 feet wide, was, for a distance of 120 feet, widened to 30 feet, and the old top was cut down to low water and reconstructed with new materials.

During 1903-4-5, an extension 80 feet long, and 32 feet wide, placed across the outer end of the old work and forming an 'L,' 40 feet in length, was constructed, as a protection to the old work, and to improve the sheltered area behind the breakwater. The work is constructed of round timber, creosoted to half tide, fully ballasted and fendered, and is protected on all outer faces with close-sheathing.

In the fiscal year ended March 31, 1907, the sum of $244.56 was expended in placing some stone in the talus, in reballasting the work in places, and in the renewal of a few pieces of covering.

Spring tides rise 4 feet.

MABOU BRIDGE.

The village of Mabou, Inverness county, is on the northeast side of Mabou river, where it is crossed by a bridge and highway, at the head of navigation, four miles from its entrance into the Gulf of St. Lawrence.

Of the appropriation for 1904-5, which was for expenditure in the construction of a wharf on the southwest side of a proposed 10 foot low water channel, (since completed), through flats nearly dry at low water, to the bridge, $968.18 was expended in procuring the materials required for a pile wharf, 121 feet in length and 20 feet in width, and for a cribwork approach, 40 by 40 feet, (with pile-work, 10 feet in width at its channel face), adjoining the approach to the bridge; in driving half the bearing-piles and in nearly completing the approach.

In 1905-6, the sum of $1,318.68 was expended, $850.21 in completing the pile-work and $468.47 in placing a top course of round timber at the sides and end of the approach, in procuring materials for a 60 foot extension of the pile-work, and in driving and capping the bearing-piles of the extension.

During the fiscal year ended March 31, 1907, the sum of $217.04 was expended in completing the extension.

MABOU HARBOUR.

Mabou harbour, Inverness county, is on the west coast of Cape Breton island, six miles northeast from Port Hood.

The entrance was formerly at the southern extremity of a range of sand hills and by an intricate channel, obstructed by a bar over which there was a depth of only 4 feet, at extreme low water.

The opening of a new channel through the sand hills at their northern extremity was undertaken in 1872. A pier, 835 feet in length, on the southern side of the new channel, was completed in 1876, and the same year the old channel was closed. Ex-

penditures were made nearly every year from 1876 to 1902 in repairs to the pier, the construction of brush and stone work on the southern side, of protection works on the northern side of the channel, and in dredging.

On the completion of repairs undertaken in 1901-2 the works included:—

On the south side: (*a*) the remains of a pier, 835 feet in length and 20 feet in width, founded in about 12 feet at extreme low water, and sloping from about 10 feet below extreme low water at the face to 2 feet above extreme low water at the back; (*b*) a work of brush and stone of various widths, extending outward from the outer end of the pier about 1,600 feet, the inner end of which is 8 feet above and the outer end 5 feet below extreme low water; and (*c*) brush and stone work at the back of the pier 800 feet in length, 10 to 12 feet in width on top, and 7 feet in average height; and, on the north side, (*d*) 5 pile and brush groynes, four of which are from 75 to 85 feet and one 45 feet in length.

In 1903, the minimum depth, at extreme low water, over the bar, about 600 feet from the head of the pier, was 8 feet 3 inches. Spring tides rise 4 feet. Since 1903 the depth over the bar has been increased by dredging.

In 1905-6, the sum of $299.94 was expended in repairing the groynes on the south side of the entrance to the harbour.

During the fiscal year ended March 31, 1907, the sum of $1,999.90 was expended in repairing the groynes on the north side of the entrance and in raising the brush and stone extension on the south side, over a distance of 320 feet, from the inner end outwards to a height of about 2 feet above extreme high water.

MALAGASH.

Malagash is situated at the extreme northwest corner of Tatamagouche bay, and is distant from the village of Wallace about twelve miles. It is a scattered and straggling settlement, some three miles in length, with a population of about 500 people. Farming is the chief pursuit of these people, although some perfunctory fishing is conducted along its shores. The Malagash oyster is famous the world over, the only drawback of late years being their scarcity.

These people are situated about six miles from any wharf, and about four miles from any railroad station, thus being unable to ship their farm produce to advantage. They therefore requested the construction of a wharf near the central portion of their settlement. In June, 1906, a contract was let for the construction of the proposed wharf, and the amount of the contract was $3,447. Work was begun last fall, but had to be stopped owing to the freezing up of Tatamagouche bay. Very good progress has been made on this work, but owing to difficulty and lost time in procuring the requisite timber for works of this nature in the summer time, it will not be finished this year.

This work consists: first, of a rock bank approach, 36 feet in length, 24 feet wide on top and 9 feet high at the outer end; secondly, of an alternate block and span, cribwork wharf, 280 feet in length, 20 feet wide, with the exception of the last 40 feet, which will be 40 feet wide, and has a height, at the outer end, of 19 feet. There is about 7½ feet of water at the end of this wharf at L.W.O.S.T.

Spring tides rise about 8 feet, and neaps about 5½ feet.

Expenditure during fiscal year ended March 31, 1907, $1,706.30.

MARGAREE HARBOUR.

Margaree harbour, at the mouth of Margaree river, Inverness county, is on the west coast of Cape Breton island, about thirty miles northeast of Port Hood. It is a narrow intricate channel through which the tide runs at the rate of four knots, and its entrance is obstructed by a bar of shifting sand over which there is, at times, a depth of only 5 feet at extreme low water.

Expenditures have been made by the department in the construction and maintenance of channel protection and improvement works on the west side of the entrance, and in the construction of beach protection works on the east side.

The works on the west side include works built by the provincial government and extended by the department, and works undertaken in 1900-1.

The old provincial government works (reconstructed by the department) extended 400 feet from the shore, across what was originally a false channel, to a large rock opposite the inner entrance and thence, at right angles, to the edge of the channel.

The work built by the department extends from the north side of the outer provincial government works outwards, along the west side of the channel, 595 feet. It is in four sections; 85 feet (built in 1876), 130 feet (built in 1879), 200 feet (built in 1890), and 180 feet (built in 1899), respectively 18, 16, 18 and 20 in width on top, and 15, 14, 12 and 16 feet in height. Each section is of round timber, open-faced, and is fully ballasted and close-fendered at the sides and outer ends. The top of the covering is from 4 feet 4 inches to 5 feet above extreme high water. The depth, at extreme low water, along the channel face, originally varied from 7 to 2½ feet. Spring tides rise 4 feet.

The improvements undertaken in 1900-1, and completed, with the exception of part of the submarine rock excavation, in 1902-3 included: deepening along the channel face of the extension to 8 feet at low water over a distance of about 400 feet, and the construction of a shear-dam, within the entrance, 180 feet in length, including 25 feet of brush and stone work, 11 feet wide on top, 100 feet of pile and brush work, 10 feet wide, and 55 feet of cribwork, 22 feet wide founded on brush in from 1 foot 3 inches to 9 feet 9 inches at extreme low water.

Expenditures were made in 1903-4 and 1904-5 in continuing the submarine rock excavation and in general repairs.

In 1905-6 the sum of $1,495.15 was expended, $936.24 in continuing the deepening to 8 feet at low water (submarine rock excavation) and $558.91 in reconstructing 239 feet of the upper portion of the old work across the false channel, from the outer rock inwards and in reballasting some of the face-chambers of the extension.

During the fiscal year ended March 31, 1907, the sum of $1,002.09 was expended in partial reconstruction of the beach protection works, on the east side of the entrance, and in reballasting and repairing the work built by the department on the west side.

MARGAREE ISLAND.

Margaree island, Inverness county, is situated in the Gulf of St. Lawrence, two and a half miles off the western coast of Cape Breton island, and twenty-seven miles northeast from Port Hood.

In 1899-1900-1, the sum of $3,312.34 was expended in procuring materials and in nearly completing a wharf, near the southern extremity of the island, 98 feet in length and 20 feet in width, including a stone abutment 26 feet in length and cribwork block extending 72 feet to 5½ feet at low water.

During a gale in September, 1900, the 72-ft. block, after losing its ballast, was moved 17 feet out of position, and the stone embankment was destroyed.

In 1901-2, the sum of $1,399.13 was expended in replacing and completing the 72-ft. block, in constructing 28 feet of cribwork between it and the shore and in making a roadway or approach, along the face of the cliff.

In 1905-6, the sum of $499.68 was expended in repairing the inner portion of the wharf including the construction of a concrete wall, on the west side, 18 feet in length, 4 feet in width and 7 feet in average height and in reballasting and covering the work between it and the east side.

In 1907, the sum of $70.95 was expended in December in procuring materials for bulk-heading and close-fendering at the existing outer end.

METEGHAN RIVER.

Meteghan river, Digby county, empties into the Bay of Fundy, at the mouth of St. Mary's bay, almost directly opposite Grand passage, between Long island and Brier island. The village at the mouth of the river is twenty miles south of Weymouth, twenty-eight miles north of Yarmouth and two and a half miles north of Meteghan or Meteghan Cove. The population of the village is about 400 people, engaged in farming, fishing, lumbering and general trade. The nearest railway station, on the Dominion Atlantic Railway, which runs parallel with the bay shore, is about four miles from the village. On the river, which is about eighteen miles long, are some twenty saw mills, most of which send lumber down to the mouth of the river for export to the West Indies and the United States, the total amount of the output aggregating over a million feet B.M. annually. The works here, which were built some years before confederation, presumably at the joint expense of the provincial government and the inhabitants, consist of two breakwaters, one on either side of the river mouth, inclosing an area of about three acres, in which at H.W.O.S.T. is a depth of 10 to 15 feet of water, giving ample berth accommodation and complete shelter to a large number of fishing and coasting vessels.

The north breakwater is about 400 feet long, 25 feet wide and 13 feet high at the outer end. Both breakwaters are built of stone-filled cribwork of the usual type. When the work came in charge of the department, the older portions were much decayed and extensive repairs were needed, which were made in 1873, at a cost of $4,500. Repairs and improvements were made in 1882, 1891, 1901-2-3-4 and 1905.

In the year 1906-7, the sum of $538 was expended in finishing the close-piling of the seaward face of the breakwater.

MILL CREEK.

Mill Creek, King's county, is a small farming settlement of some 200 or 300 people, situated on the eastern side of the Basin of Minas, three miles south of Cape Blomidon, about four miles north of Kingsport, the terminus of the Cornwallis Valley railroad, a branch of the Dominion Atlantic Railway.

Some twelve or fifteen years ago, the inhabitants, for their own convenience and accommodation in shipping fruit and farm products, built a small pile-wharf, but, their available means having given out, they were unable to finish it. The unfinished wharf was 160 feet long, and from 20 to 25 feet wide, built of pilework. During the fiscal year 1899-1900, the department expended the sum of $1,904.18 in extending and completing this old wharf. The new work is 79 feet long, in line with the old, with an ell at right angles to it, with a face length of 93 feet. The main portion of the new work is 30 feet wide, the ell being 25 feet wide. The new work is substantially built of pilework and close-piled on the west and south faces. It is 20 feet high along the whole length of the face giving about 17 feet at H.W.O.S.T. Spring tides rise here nearly 50 feet, so that at low water there is no water within a quarter of a mile of the wharf.

In 1905-6, the sum of $1,955.08 was expended in extending the pilework wharf by a substantial block of cribwork, 50 feet long, 28 feet wide and 20 feet high. Owing to the difficulty of getting labour in the month of June, the work was not quite completed at the close of the fiscal year.

In 1906-7, the sum of $360.21 was expended in a further extension of the work. Again, the work was not quite completed at the close of the fiscal year.

Spring tides rise over 50 feet.

MIDDLE COUNTRY HARBOUR.

Country Harbour, Guysborough county, is on the Atlantic coast of Nova Scotia, thirty-six miles to the westward of Cape Canso. It has an excellent land locked

anchorage, in 4½ fathoms, four miles inland and is navigable for large vessels six and a half and for small vessels to Narrows Point, eight and a half miles inland. Boats can ascend to the head of tide two miles above Narrows Point.

The sum of $3,000 was appropriated for expenditure during 1905-6, in the construction of a wharf, at Middle Country Harbour, seven miles inland or one mile below the head of navigation for small vessels at Narrows Point. A plan and specification of a proposed wharf were submitted, but up to the end of the fiscal year no further action had been taken.

A contract was entered into on March 1, 1907, in the sum of $2,200, for the construction of a wharf extending 143 feet to 14½ feet at low water, and consisting of a stone abutment, 22 feet wide on top, three cribwork blocks each 20 by 20 feet on top, and an outer block, 20 feet in line of work by 30 feet, with openings 16 feet in length spanned over ; the blocks to be of round native timber, laid open-faced, properly ballasted and fendered. Up to the end of the fiscal year ended March 31, 1907, work of construction had not been commenced.

Expenditure during 1906-7, $211.13.

MIDDLE RIVER.

Middle river, Victoria county, is a large stream emptying into Indian bay on the northern shore of St. Patrick's channel, an arm of the Little Bras d'Or lake.

About five miles from its mouth, the river flows through alluvial soil, easily acted upon by the strong current during freshets, and in consequence, a large amount of valuable land has been destroyed.

During 1903-4-5, a shear-dam, 600 feet in length and 15 feet wide, and built with piles, brush and stone, sheathed with plank on the channel face, was constructed for the purpose of closing a new channel to divert the stream into the old river bed, and to straighten the river's course.

The work has proved effective in diverting the stream, which now flows in a straight course, and the danger of destroying the adjoining lands has been greatly lessened.

During 1905-6, the sum of $499.73 has been expended in strengthening the dam, where danger of undermining existed, and in extending for a distance of 200 feet the brush and stone protection work at the upper end of the dam, to prevent the strong currents from cutting the narrow neck of land between the dam and the mainland, and form a new channel.

An examination of the river at this point was made in August, 1906; it was found that the river, above the dam, had changed its course, and that danger existed of the dam being cut off from the mainland, in which case a new channel would have formed and destroyed the usefulness of dam. During the fiscal year ended March 31, 1907, a pile, brush and stone dam, 150 feet in length, was constructed above the old dam, for the purpose of directing the course of the river back into its old bed; the brush and stone dam, on the narrow neck of land at the head of the old dam was raised and strengthened. The total expenditure incurred during the fiscal year on this work was $747.57.

NEW CAMPBELLTON.

New Campbellton, Victoria county, is at the head of Kelly's Cove, on the northern side of the Great Bras d'Or channel, about one mile from its entrance into the Atlantic ocean.

The cove is about half a mile in width, at the mouth, and a quarter of a mile in depth, and has a depth of about 20 feet at low water. It is sheltered from all winds, excepting southwesterly, but as these blow down the Bras d'Or channel, they do not cause much inconvenience.

It is the shipping place of the Cape Breton Coal Mining Co., and a port of call for the steamers of the Bras d'Or Steam Navigation Co. Owing to the want of a proper and permanent ballast ground, the ballast was often deposited by vessels, where most convenient to them without due regards to its damaging effects, and in consequence the depth of water in the cove has been reduced.

On September 13, 1905, a contract was entered into, in the sum of $17,000 for the construction of a wharf at the end of the coal shipping pier, to serve as a landing place, as well as a ballast wharf, and for repairing and strengthening the old shipping pier, which is to serve as an approach to the wharf.

The work under contract included the reconstruction of the top of the old shipping pier; the construction of a native round timber cribwork retaining wall, 165 feet long and 12 feet wide on top, along the southern side of the old pier; a creosoted timber pile extension at outer end of old work, 61 feet in length and averaging 22 feet in width; and for a cribwork extension, with creosoted timber substructure to serve as a ballast as well as a public landing wharf, forming an 'L' on the southern side of the pile extension, 200 feet long and 24 feet wide.

The work of construction was commenced early in June, 1906, and by the end of that month, the cribwork retaining wall on the southern side of the old work, was nearly completed.

Owing to delay in the delivery of the creosoted timber, little progress was made with the work during the months of July, August and September, but early in October, on the arrival of the timber, the work was vigorously resumed, and on January 24, 1907, the work under contract was completed and accepted.

After the completion of the contract, the sum of $150 was expended by days' labour, in placing an additional amount of ballast in the face-chambers of the cribwork extension.

Total expenditure during fiscal year of 1906-7, $15,775.50.

NEW HARBOUR.

New Harbour, Guysborough county, is on the southern or Atlantic coast of Nova Scotia, thirty miles to the westward of Canso harbour. It is merely a shallow bay, open to the southeast, at the head of which is the entrance to St. Catherine's river, navigable for boats five miles inland.

A contract entered into in May, 1900, for the construction of a breakwater, at Black Point, on the western side of the bay, was completed September 27, 1900.

The breakwater consisted of a stone embankment, 160 feet in length and 7 feet in average height, between the shore and 'Black Rock'; a stone embankment, 89 feet in length and 18 feet in average height, in extension of 'Black Rock'; and 160 feet of cribwork 25 feet in width, with creosoted substructure and a talus on the seaward side sloping 1½ to 1 from high water. The height of the cribwork over 15 feet of its width on the seaward side is 7 feet, and over 10 feet of its width on the inner side 3 feet 4 inches, above extreme high water. The depths, at extreme low water, at the inner and outer ends of the cribwork are respectively 6 feet and 16½ feet. Spring tides rise 6 feet.

During a southerly gale in October, 1900, the outer section of stone embankment was nearly destroyed, the cribwork was slightly damaged and most of the stone in the talus on the seaward side of the cribwork was carried away.

Repairs and improvements were made in 1902, 1903, and 1904.

During the fiscal year ended March 31, 1907, $2,125.74 was expended in repairing the stone embankment between the shore and 'Black Rock'; in placing additional stone in the talus on the seaward side of the cribwork extension, and in sorting and piling, at West Arichat, the creosoted timber required in the construction of a proposed 24 by 24 foot block, to be placed in 12 feet at low water, against the inner face of the cribwork extension.

NORTH EAST HARBOUR.

North East Harbour is a settlement of about 450 people, situated 15 miles southwest of Shelburne town. The people are chiefly engaged in the fishing industry and have to come to this place for their supplies, including salt, bait and fishing gear, and in coming here they very often, on account of the lack of proper landing facilities, loose much valuable time.

To give these people accommodation, the department began the construction of a wharf, during the spring of 1906, and in the fiscal year 1905-6, expended the sum of $3,000 upon the same.

During the last fiscal year, the sum of $999.85 was expended; there is still required $500 additional to complete.

This work, when completed, will be 950 feet in length, constructed of pile trestle bents and is connected with the shore by a rock bank and semi-cribwork approach, 165 feet in length, 16 feet wide on top. The width of the pile wharf is 10 feet on top, with the exception of the last 50 feet, which is 40 feet wide and built in the shape of a 'T,' and has a height at the outer end of 22 feet and a depth of water of 8 feet at L.W.O.S.T. A portion of the top is all that required completion at the end of the last fiscal year.

Spring tides rise here 10 feet and neaps 8 feet.

PARKER'S COVE.

Parker's Cove, Annapolis county, is a small indentation on the southeast shore of the Bay of Fundy, fifteen miles northwest of Digby Gut, and seven miles north of Annapolis, the county town; the population of the settlement is about 250 people engaged in fishing and farming.

In 1883-4, the department constructed a small breakwater substantially built of round-log cribwork, stone-filled, 200 feet long, 23½ feet to 26 feet wide on top, and at the outer end 16 feet high, where at high tide there is a depth of about 11 feet of water.

In 1900-1, the department extended the breakwater, a distance of about, 101 feet, at a cost, by contract, of $3,749. The new block is 26 feet wide on top, and from 16 to 19 feet high, substantially built of round-log cribwork, filled with ballast, well fendered, close-sheathed on the seaward side and outer end.

In 1901-2, the sum of $73.50 was expended in placing a quantity of large stone on the eastern side of the breakwater, near its outer end, to prevent the waves from undermining the work.

In 1902-3, the breakwater was extended a further length of 130 feet, with an 'L' on the outer end, having a face-length of 82 feet. This work, which was built by contract, at a cost of $10,212.60, is from 20 to 29 feet high, the stem 26 feet wide and the 'L' 30 feet wide on top. The landward side batters 1 in 6, while the eastward side is plumb and provided with a solid timber break, 4 feet 6 inches high. The extension was very strongly built of round-log cribwork, filled to the top with stone ballast, well fendered and bolted, and close-sheathed on the seaward face.

In 1903-4, the sum of $1,191.10 was expended in rebuilding the upper 2 to 4 feet in height, by 25 feet in width, of the shoreward end (the older portion of the breakwater) and in protecting the foreshore on the eastern side of the work with large stone, to prevent the sea from undermining the new block.

In 1905-6, a contract was entered into in the sum of $7,000, with Messrs. Thurston, Thurston and Durkee, of Yarmouth county, for the construction of a further extension of the breakwater. The new piece will be 99 feet long, 33 feet wide and from 28 to 34 feet high.

The work was closed down for the season on December 1, the extension being built to the full height, but lacking fenders, break and creosoted sheathing. Between December 1 and the close of the fiscal year, March 31, no work was done.

Spring tides rise about 30 feet.

Total expenditure in 1906-7, $5,797.25.

PARRSBOROUGH—DREDGING.

Parrsborough is a town of about 2,800 people, situatetd on the Cumberland Basin, about 25 miles from the town of Springhill. Considerable lumber is shipped from this port, whilst it is also the shipping port for the Cumberland Coal and Railway Company.

Owing to the changed conditions of the shipping, requiring larger and deeper draught vessels, the depth of water in Parrsborough is not sufficient to accommodate requirements of these shipping interests. The depth of water at O.H.W.S.T. is 16 feet, whilst at low water the harbour is dry. To deepen this, Mr. Shewen, resident engineer at St. John, N.B., made the necessary survey, and a contract was executed in June, 1906, for the dredging of a channel, 2,100 feet in length, 100 feet wide, which, upon its completion, would increase the depth of water to 21 feet at H.W.O.S.T. The contractor for this work is Mr. Hugh MacDonald, of Sydney, and the amount of his contract is $27,950.

This contract includes slightly over 33,000 cubic yards of spoil to be excavated, and also the construction and delivery of six scows.

During the last fiscal year, slightly more than 15,000 cubic yards were removed and the scows constructed and delivered. The work was shut down during the winter months because of the prevalence of ice in the harbour, but will be resumed as soon as spring opens.

Total expenditure during 1906-7, $13,922.50.

PEGGY'S COVE.

Peggy's Cove, Halifax county, is situated on the east side of St. Margaret's bay, near its mouth, and distant, in a westerly direction, about thirty miles from the city of Halifax. The population consists of 150 people almost wholly dependent on fishing for a living.

The little harbour, which lies between granite rocks, is about 400 feet long, 60 feet in average width and from 7 to 9 feet in depth at L.W.O.S.T. At the mouth of the harbour, which is about 40 feet wide, and over a length of about 100 feet, were strewn some fifty or sixty boulders, varying in size from about 2 cubic feet to 1½ cubic yards.

During the fiscal year 1905-6, the department expended the sum of $597.61 in the removal of these rocks, and in 1906-7 a further sum of $195.65 for the same purpose

Spring tides rise 7½ feet; neaps, 6 feet.

PEREAUX.

Pereaux, King's county, is a rich and prosperous agricultural district, with a population of some 300 or 400 people, situated on the west side of the Basin of Minas, three miles north of Kingsport, and five miles south of Cape Blomidon. From Kingsport to Cape Blomidon is a thickly settled and fertile agricultural district.

In the fiscal year 1901-2, the sum of $661.99 was expended in the partial construction of a pile wharf for the purpose of shipping fruit, farm produce, &c., and the landing of coal and general merchandise. It was satisfactorily completed in the year 1902-3, at an expenditure of $1,329.96. The wharf is a pile structure, 180 feet long, 25 feet wide, and at the outer end 20 feet high, where at high water there is a depth of 17 feet.

During the winter of 1904-5, in the maritime provinces the severest on record, the whole structure became a mass of solid ice, which, in a series of exceptionally high tides, lifted many of the piles and destroyed the whole structure to such an extent as to render it practically useless.

In 1906-7, the sum of $2,796.99 was expended in rebuilding the structure in block and span work. At the close of the fiscal year, the new work was not quite completed.

Spring tides rise over 40 feet.

PETITE RIVIÈRE.

Petite Rivière, Lunenburg county, is the centre of a thriving farming and lumbering district, situated about twelve miles southwest of the town of Bridgewater and six miles west of the mouth of La Have river. The village, which has a population of about 500, is situated at the mouth of a small river from which it takes its name. The nearest railway station is distant six miles, and the nearest harbour, at La Have, six miles distant.

A small harbour is formed by the channel of the river, which empties into a shallow bay through a sand beach. This channel is navigable for large row boats at high tide only, and the residents experience great difficulty in getting their supplies, which are discharged from schooners anchored in the bay. It is desired that this channel be improved so that small schooners can enter at high water.

During the fiscal year 1905-6, the department expended the sum of $3,999.83 in purchasing material, &c., for the construction of a breakwater on the western side of the harbour, to prevent the accumulation of sand in the harbour and to act as a shear dam in confining the current of the river to a narrow channel, in order to create a scour and remove the sand at the entrance of the harbour.

In 1906-7, the sum of $5,683.56 was expended in completing the work. It is 1,220 feet long, the first 900 feet 16 feet wide, and the outer 320 feet 20 feet wide. It is from 5 to 13 feet high, and rests upon mattresses of brush, from 20 to 30 feet in width and about 2 feet in thickness. A further extension, to increase its useful effect, will be undertaken in 1907-8.

Spring tides rise 6 feet, neaps, 5 feet.

PLEASANT BAY.

Pleasant Bay, Inverness county, is on the western coast of Cape Breton island, twenty-four miles north of Cheticamp and about midway between that place and Cape St. Lawrence.

A contract was entered into on January 29, 1906, for the construction of a wharf at Pleasant Bay for the sum of $7,500. The contract was for a continuous cribwork structure, 210 feet in length and from 16 to 20 feet in width, with an 'L' at the outer end 20 by 20 feet, creosoted to half tide, fully ballasted and close-fendered on both sides and at the outer end.

During the year 1905-6, all the materials required in the construction of the wharf, with the exception of the ballast, were delivered. The contractor commenced the construction of the cribwork early in June, but up to the end of that month no work had been placed.

During the fiscal year ended March 31, 1907, the work under contract was completed and extra work costing $150 performed. The extra work consisted in the construction of a bridge, on the right of way leading to the wharf, with brush and stone and frame work abutments, 12 feet long, 8 feet wide and 10 feet in height, placed 10 feet apart.

Total expenditure during 1906-7, $7,835.

POIRIERVILLE.

Poirierville, Richmond county, commonly known as Lower D'Escousse, is a district on the northeastern coast of Madame island, on the southern side of the eastern entrance to Lennox passage, a strait separating the island of Madame from Cape Breton island.

On September 19, 1906, a contract was entered into, in the sum of $7,575, for the construction of a public wharf, but up to March 31, 1907, the work had not been commenced.

The work under the contract is 340 feet in length and 20 feet wide, extending to 10 feet at low water, with an 'L' on the southern side of the outer end, 20 by 20 feet, and is to consist of blocks and spans, the former constructed of round timber with creosoted timber substructures.

Total expenditure during 1906-7, $65.13.

PORTER'S LAKE.

Porter's Lake, Halifax county, is a long, narrow strip of fresh water, lying nearly north and south, and situated about the middle of Halifax county, or about fifteen miles east of the provincial capital. It is about eighteen miles in length, from a quarter to half a mile wide, and the water being of good depth for almost its entire length, it is navigable for vessels of 60 tons to the extreme head. The normal level of the lake is some 2 or 3 inches above high water ordinary spring tides, which on the coast here rise 6 feet, neap, 5 feet.

Up to about 1873, the outlet, which is directly into the Atlantic, through a gravel beach about 200 feet wide, was navigable for schooners drawing 6 feet of water, and a considerable trade was then done on the lake in the export of timber, lumber, cordwood, farm produce and fish. Since that time the outlet has been gradually and permanently filling up with accumulations of gravel, washed in by southerly and easterly storms. In order to maintain the outlet, to prevent the road along the margin of the lake from being flooded, and to admit fish into the lake, the following small expenditures have been made by the department :—

1881-2	$ 200 00
1884-5	200 00
1889-90	200 00
1892-3	147 00
1897-8	100 00
1898-9	200 00
1899-1900	150 00
1902-3	49 99
1903-4	300 15
1904-5	160 40
1905-6	61 18
1906-7	38 71
	$ 1,813 43

These expenditures have resulted in but slight temporary relief, and no permanent improvement. The department, in 1900-1, expended the sum of $8,262.44 in beginning the construction of a permanent channel through the neck of land 2,400 feet wide, separating the main body of the lake from the extreme head of Three Fathom harbour. In 1901-2 a further sum of $5,987.24 was expended on the permanent outlet. In 1902-3, the sum of $2,455.67 was expended on the permanent and $49.99 on the temporary (old) outlet.

In 1904-5, the sum of $4,248.67 was expended on the new or permanent outlet.

In 1905-6, the sum of $968.68 was expended on the permanent outlet and $61.18 on the temporary outlet.

In 1906-7, the sum of $38.71 was expended on reopening the temporary outlet.

During the year 1905-6 the amount of $199.92 was expended in beginning a new outlet at Graham's Head. The total expenditure to date is :

On permanent outlet	$21,924 96
On temporary outlet	1,813 43
On new outlet	199 92
	$23,938 31

PORT GEORGE.

Port George, Annapolis county, is a village of some 300 to 400 people situated on the south shore of the Bay of Fundy, thirty-seven miles northeast of Digby Gut, forty-two miles southwest of Scott's Bay, nine miles southwest from Margaretville and seven miles northwest from Middleton on the Dominion Atlantic Railway.

Some years before confederation the provincial government built a western breakwater and an eastern pier or wharf. The breakwater is 440 feet long, from 25 to 35 feet wide on top, and, at the outer end, where there is about 21 feet of water at H.W.O.S.T., it is about 25 feet high. It is built of round-log, stone-filled cribwork, the western or seaward face and outer end being close-sheathed.

The wharf, on the eastern side of the little harbour, is 205 feet long, 20 feet wide and 18 feet high at the outer end. It is built of round-log cribwork, and the outer end, on which is built a small lighthouse, is close-sheathed. In 1874, the harbour was taken charge of by this department, and in that and the following year, the sum of $7,000 was expended in repairing and refacing the breakwater which was much decayed. In the autumn of 1888 the outer end of the breakwater was destroyed by a severe storm, 165 feet in length being wrecked, and an additional length of 30 feet being much injured. Before repairs could be made, a second storm destroyed the damaged portion, leaving 195 feet of the work a complete wreck and rendering the harbour practically useless.

In 1890-1, the destroyed portion of the work was rebuilt by contract.

Repairs were made in 1894 and in 1901.

In 1901-2, the sum of $2,297.46 was expended in continuing the construction of the detached breakwater begun the previous year. The work thus extended measured 102 feet long, 32 feet high at the lower end and 26 feet at the upper, 20 feet wide at the top. It is plumb on the seaward face and batters 1 in 4 on the back.

In 1902-3, the sum of $2,287.46 was expended in beginning the construction of an extension of 100 feet in length of this work.

In 1903-4, the sum of $5,807.95 was expended in completing the breakwater begun in 1901, and in renewing the top of 200 feet in length of the main breakwater a height of from 3 to 5 feet. The detached breakwater is 200 feet long, 20 feet wide on top and from 17 to 32 feet in height. It is very strongly built of round-log cribwork filled with stone.

In 1904-5, the sum of $199.50 was expended in repairs.

In 1906-7, the sum of $330.83 was expended in the purchase of timber for the purpose of rebuilding a portion of the shoreward end of the breakwater.

Spring tides rise 30 feet

PORT HOOD HARBOUR.

The harbour of Port Hood is on the west coast of Cape Breton island, about twenty miles to the northward of the northern entrance to the strait of Canso.

The harbour was formerly a secure one, Smith island, which forms its west side, having been connected with the mainland by a range of sand hills. In 1839 the sea made a breach through this protection work; the opening, at first narrow, was enlarged by the tidal currents, with increasing rapidity, until it was entirely swept away. The harbour is now unsafe during northerly gales, except in a small cove on the east side of Smith island.

In March, 1902, a report was submitted on the closing of the northern entrance, in which the estimated cost of work suggested varied from $482,000 to $291,000, according to design and location.

The amount appropriated for 1903-4 ($20,000) was for expenditure by day labour in constructing a portion of a breakwater of brush and stone with stone talus and covering. Operations were commenced in May and were in progress at the close of the fiscal year ended June 30, when the expenditure amounted to $2,968.85. This sum was expended in procuring materials and in constructing a work of brush and stone 28 feet in width on top, at high water level, extending from the mainland 330 feet to 3 feet at extreme low water.

In 1904-5, the sum of $19,952.44 was expended in extending the brush and stone work 470 feet (800 feet from the mainland) to 6 feet at extreme low water, and in placing a talus (on both sides) and a covering of quarried stone.

Of the amount appropriated for 1905-6, the sum of $9,999.84 was expended, $2,984 in March and April in procuring materials and the balance in July, August and September, in extending the brush and stone work 188 feet (988 feet from the inner end) to 9½ feet at extreme low water, and in placing a talus (on both sides) and a covering of quarried stone.

Operations were resumed June 1 and continued up to October 31. The appropriation for the fiscal year ended March 31, 1907, was expended in June, July and August, in extending the brush and stonework 309 feet, 988 to 1,297 feet from the inner end. Of the 309 feet, the inner 60 feet were completed up to 2 feet above high water, and protected with quarried stone on each side and on top; 191 feet were up to within 1½ feet of low water with quarried stone on the seaward side, and 58 feet of outer brush work were up to 5 feet below water.

There was also expended in August, September and October an additional sum of $1,814.77 in placing quarried stone over the 249 feet of work left unprotected.

Total expenditure during 1906-7, $20,099.53, including $5,099.15 for dredging.

PORT HOOD WHARF.

Port Hood, the shire town of Inverness county, is on the west coast of Cape Breton Island, twenty miles north of the northern entrance to the strait of Canso.

A pier, on the east side of the harbour, commenced by the provincial government in 1865, was originally 550 feet in length and 24 feet in width, with an 'L' on the south side of the outer end 100 feet in length and 25 feet in width. It came under the charge of the federal government in 1871, since which time extensive repairs and renewals have been made, including the construction of a new block, 125 by 25 feet, at the outer end in 1873, the construction of a block 50 by 32 feet at the south end of the 'L' in 1888-9; and the construction of a block, 71 by 24 feet, at the outer end in 1889-90. The old provincial government work was of square timber close-faced, the additions and parts reconstructed by the department are of round timber laid open-faced. The pier has been protected, on the seaward side, at the outer end, and on the south end and inner side of the 'L,' by close-piling, and on both sides to within 74 feet of the outer end by a stone talus.

In 1905-6, the sum of $600 was expended in renewing the floor-stringers and covering near the inner end, and in renewing close-piling and ballast at the outer end.

During the fiscal year ended March 31, 1907, the sum of $1,500.05 was expended in raising, repairing and close-piling the outer end of the wharf; in placing quarried stone in the talus on the seaward side, and in general repairs to the seaward face.

PORT LATOUR.

Port Latour, Shelburne county, is a fishing and farming settlement, situated twenty-five miles, southwest of Shelburne town. Population, 700.

The harbour is about four miles long north and south, and two miles wide east and west, with a depth of water of from five to seven fathoms. Spring tides rise here 10 feet, neaps 7 feet. (For further description see report 1905-6.)

During 1905-6, we expended $5,307.84 and, during the last fiscal year, $4,180.78 in constructing a cribwork extension to this work.

It is now completed, though not quite full of ballast at one portion of it, but the season was so late that to procure ballast then would cost two or three times more than the stuff was worth, and I also felt confident that there was sufficient ballast to keep the breakwater from incurring any serious damage in its condition.

This breakwater consists of two portions, one 478 feet in length and 25 feet wide on top with a height of 19 feet at the outer end, consisting of solid stonework and the other of the usual continuous cribwork style of construction, 235 feet in length, 26 feet high at the outer end and 20 feet wide on top. This makes the breakwater 713 feet in length over ⅔ of which is of permanent material.

This rock work was built in sections of 25 to 35 feet in length, the inside and outside face of which are constructed of large stones from 4 to 6 feet thick, and the insides 15 to 17 feet in width filled in with smaller rocks, and the whole top inside these walls is neatly gravelled with from 6 to 12 inches of good, coarse gravel.

PORT LORNE.

Port Lorne, Annapolis county, formerly called Port William or Marshall's Cove, is situated on the Bay of Fundy, thirty-two miles northeast of Digby Gut, and six miles northeast from Paradise station, on the Dominion Atlantic Railway. The settlement comprises about 300 people, engaged in fishing and farming.

The breakwater was begun in 1835 at the joint expense of the inhabitants and the provincial government, the outlay on the work up to 1867 being $16,000. The first work done by this department was in 1873-4, when the breakwater was extended a length of 67 feet. In 1882-3-4, the work was further extended a length of 100 feet, width 35 feet and height 25 feet. The new block was built close-faced with square timber both inside and outside, and provided with a break 4 feet high. During the next few years several repairs were made. In 1897-8 a reenforcing block was built on the seaward face and outer end of the breakwater, 78 feet long, 37 feet high and 13 feet wide, in addition to other important repairs made.

In 1900-1 the sum of $2,176 was expended in important repairs.

In 1902-3, the sum of $1,198.48 was expended in rebuilding a portion of the shore end of the seaward face of the breakwater, 50 feet long, 15 feet wide and from 6 to 15 feet high, with solid stone-filled cribwork; also in rebuilding a portion of the break on the shore end, 33 feet long, 8 feet wide and 6 to 10 feet high.

In 1904-5, the sum of $999.93 was expended in taking down and rebuilding a portion of the shore end of the breakwater.

In 1905-6, the sum of $757.99 was expended in taking down and rebuilding a piece of the middle of the length of the breakwater, which was much dilapidated.

In 1906-7, the sum of $742.96 was expended in taking down and rebuilding a dilapidated portion of the work, 80 feet in length, 24 to 30 feet wide, and from 14 to 19 feet high.

The work was transferred to the control of the Department of Marine and Fisheries on June 12, 1889.

Spring tides rise 30 feet.

PUGWASH.

Pugwash is a village of about 1,100 people, situated on the Northumberland strait, about ten miles northwest of Wallace.

In 1897, the department constructed a cribwork wharf, which, in conjunction with the old railway wharf, is used for loading large steamers engaged in the transportation

of deals. By this means, some 25,000,000 feet of lumber are annually shipped from this port, so that during the season of navigation these two wharfs are practically monopolized by these interests. As Pugwash harbour is one of the best harbours on the north side of Nova Scotia, much shipping by smaller vessels takes place, but owing to the large steamers using the other wharfs the smaller shipping interests are much handicapped and their development greatly injured or retarded. As the country surrounding Pugwash is somewhat populous and fertile, and as much important fishing interests are also adjacent, one could easily see that facilities for the transportation of the products of this district were much needed; therefore it was decided to construct an additional wharf at this place, largely for the accommodation of these smaller interests.

A contract let early in June, 1906; amount of contract is $11,495. The work was put in hand as soon as possible and was completed within the fiscal year.

The work consists of a rock bank approach, 30 feet in length, 24 feet on top and a height of 10 feet at the outer end; secondly of a solid continuous log faced and stone filled cribwork stem, 280 feet in length, 20 feet wide on top. With the exception of the last 28 feet, which is 40 feet wide on top and has a height at the outer end of 33 feet with a depth of water, at its outer end, at L.W.O.S.T., of 23 feet. From a point 3 feet below H.W.O.S.T. to the bottom of the work, this work is sheathed with 4-inch creosoted loblolly pine timber. Spring tides rise here 6½ feet; neaps, 5 feet.

Expenditure during 1906-7, $7,649.

RAY'S CREEK.

Ray's Creek, Annapolis county, Upper Granville, is a thickly settled and very rich farming district, situated on the north bank of the Annapolis river, some four miles below Bridgetown and about ten miles above Annapolis. Within a radius of three miles there is a population of 800 to 1,000 people. The nearest public wharf is at Granville Centre, six miles below, built by the department in 1902-3. There are two small dilapidated private wharfs, one a mile and a quarter above, and the other one mile below, but they are small, inconvenient and out of repair.

For the convenience of local trade, the department, in 1905-6, expended the sum of $1,500.65 in beginning the construction of a public wharf of pile-work at Ray's Creek, about the centre of the district. The work done under the expenditure was the construction of an approach and the purchase and delivery of the whole of the materials.

In 1906-7, the sum of $1,189.85 was expended in completing the work, which consist of a pile-wharf, 225 feet long, the shoreward part being 140 feet in length, 22 feet wide, by an average height of 6 feet, the outer portion being 53 feet wide and from 6 to 22 feet high. Along the face, at H.W.O.S.T., there is a depth of 20 feet of water.

Spring tides rise about 30 feet.

RIVER BOURGEOISE.

Bourgeoise inlet, Richmond county, commonly called River Bourgeoise, is on the northern side of the eastern entrance to Lennox Passage, (a strait connecting St. Peter's bay with the strait of Canso), and about four miles to the westward of St. Peter's canal at the head of St. Peter's bay. It extends inland three quarters of a mile and then branches east and west. The depth, at low water, at the entrance, is 12 feet, and over the greater part of the area inside from 12 to 18 feet. Spring tides rise 5½ feet.

In 1905-6, a wharf on the northern side of the inlet, nearly midway between its east and west extremities and nearly opposite the entrance, known as 'Boyd's wharf,' was purchased by the department and the work of reconstructing and extending it

undertaken. The work proposed included raising and strengthening 'Boyd's wharf,' which is 49 feet in width and extending it 24 feet, with creosoted pile-work, to 9½ feet at extreme low water.

During the fiscal year ended March 31, 1907, the sum of $853.60 was expended in procuring all the timber required for reconstructing and extending the wharf, with the exception of the creosoted timber for side-piling the old work and for piling in the extension, and in nearly completing the reconstruction of the old work.

ROUND HILL.

Round Hill, Annapolis county, is a thickly settled and very prosperous farming district, situated about eight miles east of the town of Annapolis. There is a station on the Dominion Atlantic Railway, and the village, with a population of about 500 people, is situated from a quarter to half a mile to the south of the Annapolis river, which is navigable at high water for large vessels up as far as Bridgetown, some seven miles further up.

Some thirty years ago, a small wharf of cribwork was built by private enterprise, but it fell into disuse some fifteen years ago. At the present time all that remains of it consists of a few logs and a litttle pile of ballast.

For the benefit of local trade the department, in 1905-6, expended the sum of $2,000.14 in the construction of a public wharf. At the close of the fiscal year the work was about two-thirds completed. It consists of a pile-work stem, 76 feet long by 25 feet wide, from 5 to 10 feet high, terminating in a substantial block of stone-filled cribwork, 75 feet long, 35 feet wide and from 16 to 22 high, founded on piles, driven to hard bottom and cut off level with the mud. Along the face of the wharf at high water there will be about 16 feet of water.

In 1906-7 the sum of $1,997.41 was expended in the construction of the wharf, which, at the close of the fiscal year, was not quite completed.

SCOTCH COVE.

Scotch Cove, Victoria county forms the southeastern part of Aspy bay, and is about three-quarters of a mile south from White Point, which is on the southern side of the entrance into the bay.

The sum of $10,000 was voted for expenditure during 1906-7, towards the construction of a breakwater for the protection of fishing boats and small craft, and on February 6, 1907, a plan and specification for the work proposed, estimated to cost $30,800, were submitted to the department for approval.

The proposed breakwater is 320 feet in length, and will extend to 19 feet at low water; with the exception of the inner end, for a distance of 40 feet, which is to be of stone and 16 feet wide on top, it is to consist of cribwork with creosoted timber substructure, 20 feet wide for a distance of 80 feet, 24 feet wide for a further distance of 80 feet, and 30 feet wide for the remaining distance of 120 feet. The faces of the cribwork are to be constructed of square timber, laid open-faced, with ties of round timber, and the work is to be fully ballasted. The seaward face, the outer end, and the inner face for a distance of 30 feet from the outer end are to be close-sheathed, and a brush mattress, loaded with stone, is to be placed along the seaward face of the work, for a distance of 200 feet from its outer end.

Up to March 31, 1907, tenders for the construction of the work had not been called.

Expenditure during 1906-7, for preparation of plans, &c., $32.78.

SCOTT'S BAY.

Scott's Bay, King's county, is on the south side of Minas channel, Bay of Fundy, between Cape Split and Baxter's harbour. The population of the settlement, within a radius of a couple of miles, is about 500.

In 1878 the department built a block of cribwork, 50 feet long, 30 feet wide and about 20 feet high, connected with the shore by a double row of close piling, 210 feet long, from the southeast corner of the block; the cribwork was built of close-faced work, well fendered and ballasted. The work was located on the west side of Jess creek, and formed a harbour or shelter for vessels during southwest storms.

As it had no floor, much of the ballast has been removed, presumably for ballasting schooners. Both the block and close piling are more or less dilapidated, 30 in length of the close-piling and the upper 15 feet in height of the block being totally destroyed. The expenditure on this block and the close pile work by department from 1867 to 1882 was $3,000.

In 1900-1, the department expended the sum of $500 in building two blocks of cribwork, one on either side of the mouth of the creek. The northern block is 115 feet long, 6 to 8 feet high and 10 feet wide; also in extending the south breakwater by a block 75 feet long, 10 to 12 feet high and 12 feet wide. Some minor repairs were also made to the older portion of the northern breakwater.

In 1903-4, the department expended the sum of $1,342.52 in further improvements.

In 1904-5, the sum of $999.09 was expended in constructing a new block of cribwork, 57 feet long, 20 feet wide and 18 feet high, in extension of the breakwater on the south side of the mouth of the stream; a small cross-block on the same work, 50 feet long, 10 feet wide and 8 feet high, also a small cross-block on the shore end of the north breakwater, 50 feet long, 10 feet wide and 12 feet high, together with fenders and a top course of logs on the portion of the new work built last year on the south side of the creek.

In 1905-6, the sum of $2,089.96 was expended in building an extension to the north breakwater. The new block is 70 feet long, 20 feet wide and 20 feet high, well filled with ballast and close-sheathed on the northern side and outer end.

In 1906-7, the sum of $2,794 was expended in extending the south breakwater by a new block of substantial cribwork, 60 feet long, 28 feet wide and 26 feet high. 150 feet in length of the shoreward portion of the south breakwater was also close-sheathed, to prevent undermining by the brook which issues alongside. The north breakwater was also raised from 1 to 4 feet, to make up for settlement, and new floored.

SKINNER'S COVE.

Skinners' Cove, Pictou county, is on the western side of Northumberland strait, about four miles east of Cape John, and about twenty miles northwest of the entrance to Pictou harbour. A pond at the head of the Cove is separated from the waters of the strait by a beach of sand 250 feet in width.

On January 5, 1905, a contract was entered into for opening a channel through the beach and for the construction of protection works for $10,950.

The works under contract included the excavation of a channel 15 feet in width at bottom and 425 feet in length, to a depth of 2½ feet at low water, and the construction of piers of brush, stone and piles, 304 feet in length and 15 feet in width on each side, and of a cribwork block, 40 feet in length and 20 feet in width, with creosoted substructure at the outer end of each pier. Spring tides rise 7 feet.

At the close of the year 1904-5, the outer blocks were completed with the exception of placing the cap-timbers and upper fenders and sheathing, and 40 piles of inner work were in place.

In 1905-6, the work under contract was completed with the exception of part of the dredging, and some extra work was performed, including: the extension of the piers on each side of the channel inwards 40 feet, and the placing of additional close-sheathing for a length of 144 feet on the seaward side and at the inner end of the western pier.

The work under contract was completed on the 1st of August, 1906.

Total expenditure during fiscal year of 1906-7, $1,759.91.

SYDNEY QUARANTINE.

The quarantine station in Sydney harbour is on the southern arm, near Keating Point and about three-quarters of a mile from Point Edward, at the eastern extremity of land lying between the south and west arms.

A wharf built by the Department of Marine and Fisheries and repaired and extended in 1892-3 consists of a block and span structure extending 148 feet to 8 feet at low water. Spring tides rise 5 feet.

In 1903-4, the sum of $1,551.52 was expended in procuring creosoted timber and other materials to be used in repairing and extending the wharf.

The old wharf having fallen into such a dilapidated condition as to render its reconstruction and extension inadvisable, the appropriation for 1904-5 was made for expenditure in constructing a new wharf, using materials procured in 1903-4.

During the year, $1,667.66 was expended in procuring the additional materials required in the construction of a wharf to extend 173 feet to 10½ feet at low or 15½ feet at high water; consisting of an inner and 4 intermediate blocks, 14 feet in width, and an outer block 20 feet in line of work by 40 feet, and in constructing the inner and three intermediate blocks.

In 1905-6, the sum of $1,098.97 was expended in completing the work in progress in 1904-5.

During the fiscal year ended March 31, 1907, the sum of $249.19 was expended in procuring the timber required for raising the inner end of the inner block, and in close-fendering the outer end of the wharf.

TATAMAGOUCHE.

Tatamagouche, Colchester county, is a seaport town on the Northumberland strait, thirty miles from Truro. It is also an important station on the Intercolonial short line running from Oxford Junction to Pictou.

During the fiscal year 1905-6 the department expended the sum of $1,116.19 in beginning the construction of a cribwork wharf.

In 1906-7, the sum of $810.27 was expended in completing the work. It consists of a cribwork wharf built over and around an ancient structure. The new work is 100 feet long, 62 feet wide and at the outer end 14 feet high, with a depth of water of 12 feet.

Spring tides rise 6 feet; neaps, 5 feet.

TONY RIVER.

Tony River, Pictou county, is a small stream emptying into the Northumberland strait about midway between Pictou harbour and Amet Sound.

The appropriation for 1905-6 was for expenditure in opening a new channel through the beach obstructing the entrance and towards the construction of the necessary protection works. During the year, the sum of $4,253.55 was expended in procuring the timber and iron required in the protection works and in construction. On June 30 the protection work on the east side was completed with the exception of placing the floor stringers, covering and fenders and 95 feet of the substructure of the work on the west side was in place and ballasted.

In 1907, $2,103.11 was expended in July and August in completing the channel and protection works.

The protection works constructed on the east side and on the west are respectively 206 and 146 feet in length, and 14 feet in width on top, except the outer 32 feet of the work on the east side which are 20 feet in width. The piers are 35 feet apart and are each 10 feet in height from 1½ feet below to 8½ feet above extreme low water. The depth, at extreme low water, in the channel between the piers and outwards for a distance of about 50 feet is 1½ feet.

TRACADIE.

Tracadie harbour, Antigonish county, is on the southern shore of St. George's bay, eleven miles west from the northern entrance to the strait of Canso.

The works here consists of a breakwater on the eastern side of the entrance of the harbour, and of a breastwork in extension of the breakwater inward and along the beach to the southward of it, to prevent scouring and undermining of the bank by the tidal currents.

The breakwater extends 120 feet out to the edge of the channel, thence along the line of channel, outwards, 100 feet. The latter section is constructed on the remains of old work; it is 16 feet wide for a distance of 64 feet and 20 feet wide over the outer 36 feet, and is constructed of round timber with creosoted timber substructure.

In 1905-6, the sum of $1,199.57 was expended in the reconstruction of the outer 36 feet of the breakwater, which had been carried away down to low water.

During the fiscal year ended March 31, 1907, the sum of $449.97 was expended in repairs to the breakwater including levelling up the inner 64 feet of the outer section, the renewal of some covering and fenders and reballasting where required.

WALLACE.

Wallace is a scattering settlement, situated on Wallace bay, which bay runs inland a distance of eleven miles from Malagash Point. The people, who number about 1,000, are engaged in farming, fishing and quarrying.

The village of Wallace is situated on the south side of this bay, whilst on the north side of said bay, the settlements of North Wallace, Fox Harbour and Gulf Shore are located. Prior to confederation, the Nova Scotia government constructed a small wharf on the north side of this harbour for landing purposes, which wharf has been repaired several times by the department since confederation.

In the year 1897, the department constructed another wharf on the south side of the harbour. A steam ferry was established between these two wharfs, and a channel from the heads of these wharfs to the main harbour channel was dredged, so that ferriage between the two sides of the harbour could be conducted at all times of tide. This dredging soon filled up and in the year 1905, we began operations, having in view the extension of both of these wharfs to the main harbour channel. In the fiscal year 1905-6, we expended $10,193.82; in the fiscal year 1904-5, we expended about $4,850, and during the last year we expended $2,500.50. This work is practically completed.

We extended the wharf on the north side 1,440 feet, 1,420 of which consists of pile trestle bents, situated 10 feet apart with a width of 16 feet on top; the last 20 feet is 40 feet wide on top and is constructed of round logs, stone filled cribwork.

The south wharf was extended 223 feet with a width of 20 feet on top, and a height of 14 feet at the outer end. This extension is constructed of continuous round log, stone filled cribwork, well fastened and fendered. Solid cribwork was used in this extension because it was located in the position of the old dredging, which cut had completely filled up with a soft mud or silt, which material would not support piles, it being so soft that our cribwork settled in it from 4 to 6 feet.

Spring tides rise here from 6½ to 7 feet; neaps, 5 feet.

WEST ARICHAT (BREAKWATER.)

West Arichat, Richmond county, is a small but safe harbour on the west coast of Isle Madame, sheltered from the south and west by Creighton island and by a breakwater between it and Isle Madame.

The breakwater is 1,211 feet in length and 24 feet in width, of round timber, open-faced and fully ballasted. The top of the covering is 11 feet above the bottom which dries at low water, except near a 25 foot opening, 588 from the west end.

In 1904-5 and 1905-6, the sum of $1,486.46 was expended in renewing the floor-stringers and covering in places, and in repairs on each side of the opening, including

repairing and strengthening the work on the west side and reconstructing a portion of the work on the east side.

During the fiscal year ended March 31, 1907, the sum of $254.27 was expended in procuring the materials required for renewing the floor-stringers of 308 feet of the breakwater, and for renewing the close-fendering in places, in placing all the materials, except 45 floor-stringers and 10 fenders.

WEST ARICHAT WHARF.

West Arichat, Richmond county, is a large settlement on the south side of Madame island, about three miles to the westward of the town of Arichat.

The harbour is easy of access and perfectly safe, being sheltered from the south and west by Creighton island and by the breakwater between the island and the mainland. On August 28, 1905, a contract, in the sum of $5,275 was entered into for the construction of a wharf at Bosdet point, on the northern side of the entrance to the harbour.

The work under contract consists of a block and span wharf, 88 feet in length and 20 feet wide, extending to 15 feet at low water, with an 'L' on the eastern side of the outer end, 28 feet long and 24 feet wide; and of a cribwork approach, 300 feet in length and 16 feet wide, on top of the beach, to connect the wharf with the public road. The blocks in the wharf are to be built of round timber, with creosoted timber substructure, properly ballasted and fendered, and the outer faces of the outer block are to be close-sheathed between the fenders.

The work of construction was commenced early in June, 1906, and by the end of that month the cribwork approach was completed.

During the fiscal year ended March 31, 1907, owing to the delay in the delivery of the creosoted timber required, which did not arrive until the middle of November, and the stormy weather which sets afterwards, no progress was made with the work.

Expenditure in 1906-7, $2,427.50.

WEST HEAD, CAPE SABLE ISLAND.

This headland is the most westerly point on Cape Sable island, and is situated about two miles from Clark's Harbour, and at the southwestern end of Barrington passage. It is an important fishing section on this island. Owing to its situation it would prove to be the most convenient and easiest of approach for coasting steamers of the several possible ports of call on this island. However, as it lies in such an exposed position, it is necessary to construct a wharf, which not only will accommodate the shipping but will also be a breakwater, and thus adequately protect whatever shipping may be loading or discharging along its sides.

The department, during the fall of 1906, began the construction of a breakwater at this place, and during the present fiscal year will probably complete the same. The amount expended during the last fiscal year was $3,437.27. For this amount, the approach to the wharf, 95 feet long, 24 feet wide on top and 10 feet high at the outer end, and 60 feet of the cribwork were constructed, and we had on hand at the end of the fiscal year a little more than half the material necessary to complete the remainder of the work.

The proposed work when completed will consist of a rock bank approach, 95 feet long, 24 feet wide on top and 10 feet high at the outer end; the wharf proper will be 210 feet long, 20 feet wide on top, with the exception of the last 40 feet, which will be 50 feet wide on top. There will be from 13 to 15 feet of water at the outer end at L.W.O.S.T. The work is constructed of continuous cribwork of the usual type. Spring tides rise here 11 feet and neap 8½ feet.

WEST QUODDY.

West Quoddy, Halifax county, is a scattered settlement of about 300 people, situated on the south coast of Halifax county, eighty miles east from the city of Halifax and five miles west of Salmon river.

During the fiscal year 1905-6 the department expended the sum of $366.75 in the purchase of material for the construction of a pile wharf. In 1906-7 the sum of $2,487.63 was expended in building the wharf. It is a pile structure, 211 feet long, 25 feet wide, and having an ell on the outer end, giving a face length of 50 feet, along which, at L.W.O.S.T., there is 13 feet of water. The approach to the wharf is a stone bank, 100 feet long, 25 feet wide and from 1 to 6 feet high. A freight shed, 12 feet by 16 feet, was built on the ell for the convenience of local shippers and merchants.

Spring tides rise 6½ feet; neaps, 5 feet.

WEST RIVER, SHEET HARBOUR.

West River, Sheet harbour, Halifax county, is situated on the Atlantic coast of Nova Scotia, in the eastern part of Halifax county. The village, which surrounds the harbour, contains a population of about 600 people, and is a thrifty and prosperous community engaged in farming and fishing. The harbour is one of the finest in Nova Scotia, being of considerable extent and having an abundant depth of water. It runs inland about six and a half miles to Jarred's Point, where it divides into two arms, receiving respectively the waters of the East and West rivers.

During the fiscal year 1905-6, the department expended the sum of $2,205.15 in building a cribwork and pile-wharf, at the mouth of the West river.

In 1906-7, a further sum of $1,298.44 was expended in completing the work. The wharf consists, first, of a stone bank approach, 50 feet long, 25 feet wide and from 2 to 8 feet high. Second, pile-work, 141 feet long, 21 feet wide and from 8 to 20 feet high, the pile-bents being 10 feet apart. Third, substantial cribwork, 40 feet long, 25 feet wide and 20 to 22 feet high, with an ell 61 feet long and 20 feet wide, giving a face-length of 86 feet, along which, at L.W.O.S.T., there is 15 feet of water.

Spring tides rise 6 feet; neaps, 5 feet.

WEYMOUTH.

Weymouth, Digby county, the second largest town in the county, with a population of 1,200 people, is situated twenty miles southwest from the town of Digby. It is on the Sissiboo river, two miles from its mouth. Some four or five millions feet of lumber are annually shipped to South America and other ports, and a considerable trade is done.

In 1905-6, the department expended the sum of $650.01 in constructing, in the public dock on the north side of the river immediately below the highway bridge, a pile-work inclined boat-slip, 50 feet long, 12 feet wide and from 3 to 5 feet high, with a stone bank approach 50 feet long and from 1 to 5 feet high. An old block of cribwork, which obstructed the entrance to the public dock, was partially removed.

In 1906-7, the sum of $371.20 was expended in completing the removal of the obstructing block of cribwork.

WOLFVILLE.

Wolfville, King's county, is a town of about 2,000 inhabitants situated on the right bank and near the mouth of the Cornwallis river, which issues into the Basin of Minas, at its southwest corner. It is an important station on the Dominion Atlantic Railway, half way between Annapolis and Halifax, sixty-six miles from Annapolis and seven miles east of Kentville, the county town of King's.

In 1900-1, the department, at a cost of $6,360.50, built, by contract, a public wharf on the right bank of the river, near its mouth, at a distance of about half a mile from the town. The approach consists of earth-work, an embankment 144 feet in length, 25 feet wide and of an average height of five feet. The wharf itself, which was substantially built of pile-work, was 152 feet long, 36 feet wide, including an inclined slip on the south side, 10 feet wide. It had an ell on the outer end, 82 feet long, giving a total face length on the river channel of 116 feet; the ell was 40 feet wide and from 48 to 49½ feet in height along the face, giving a depth of water, at H.W.O.S.T., of about 46 feet. At L.W.O.S.T. the river channel carries a depth of from 4 to 5 feet of mostly fresh water.

In 1902-3, the channel of the river moved shorewards, owing to erosion, a distance of some 20 to 30 feet, causing the two outer rows of piles of the wharf to lose more than half their hold in the sand and mud. In consequence of this, it became necessary to build cribwork in the spaces between the two outer rows of piles, at the end of the ell and at the opposite end of the wharf alongside the inclined slip. This mode of treatment being insufficient, and the scour continuing, it was decided to remove the outer 20 feet in width for the whole 116 feet in length of the wharf and rebuild it on the inner side of the ell. The work was begun on October 1, 1903, and vigorously carried on until December 24, when, owing to the severity of the weather, and the rapidly accumulating ice, operations were suspended.

The winter of 1903-4 was the severest known for a great many years. Ice formed in and around the piles of the wharf to a greater weight and thickness than had been known since the wharf was built. The floating power of the ice, added to the reduced hold of the piles in the bottom from the erosion of the channel caused the whole ell to be lifted up by an exceptionally high tide, on March 3, 1904, to a height of from 5 to 8 feet. A few days later the whole outer portion of the wharf, including the ell, was carried away and destroyed.

In 1903-4, the sum of $1,768.89 was expended in above alterations and improvements, and, after the destruction of the wharf in saving such of the timber as was possible.

In 1904-5, the sum of $78.80 was expended in saving and booming old timber from the destroyed pile-wharf, and the sum of $2,563.41 in beginning the construction of a substantial cribwork wharf in its place. At the close of the fiscal year the work was about one-third completed.

In 1905-6, the sum of $4,310.13 was expended in completing the construction of a new wharf of cribwork in place of the old one of pilework destroyed by ice. The wharf is a solid block of cribwork, with a stem 50 feet long by 28 feet wide and from 14 to 29 feet high. The ell on the outer end, is 100 feet long, 28 feet wide, and 29 feet high along the whole face, where at high water, there is 25 feet of water. Along the front of the ell there has been built a platform 110 feet long and 25 feet wide, with its top 29 feet below the floor of the wharf, for the purpose of permitting vessels to lie at the wharf during low water. The platform is built of piles firmly driven, well braced and capped with 10 by 10 caps.

In 1906-7, the sum of $224.68 was expended in filling with brush and stone the spaces between the pile-bents, forming the bed for vessels to lie on.

Spring tides rise 48 feet; neaps, 40 feet.

WRECK COVE.

Wreck Cove, Victoria county, is at the mouth of the brook of the same name, on the northeast coast of Cape Breton island, twenty miles north from St. Ann's harbour and ten miles south from South bay, Ingonish.

A landing place for boats near the mouth of the brook was rendered unsafe by the diversion of the stream and the opening of a second outlet.

During 1890-1, the sum of $700, together with $200 paid by the locality, were expended by the department in the construction of a brush and stone dam, to confine the

stream to its old channel and to restore the landing place to its original condition. The improvement proved successful, but as the stone in the dam had been disturbed in places and settled in others, permitting of the water during freshets to run over the low portions of the dam, during the fiscal year ended March 31, 1907, the sum of $500 was expended in raising and repairing the dam, and in extending it a distance of 100 feet; the course of the brook was also straightened above the dam by cutting away a point of the bank which threw the force of the water on to the dam.

PRINCE EDWARD ISLAND.

ANNANDALE.

Annandale pier, King's county, is situated on the north side of Grand river, near its entrance into Boughton Bay, and consists of a shore abutment or approach, 300 feet long by 22 feet wide, and a pier head, 140 feet long by 36 feet wide, fronting on the channel, where a depth of 7 feet at low water or 12 feet at H.W.S. tides is carried.

The approach, excepting on a short span of 18 feet, which is floor stringered and planked over, is constructed with sides of close-faced timber work, filled in between with brush, stone, gravel and clay, latter forming roadway. The pier head is partly formed of cribwork, partly of pile bents, this latter being about outer half, which is capped, all of it being floor stringered and planked over; the face and ends of the pier head are close piled.

The work is one of the Prince Edward Island piers, control of which was assumed by the Dominion government in 1883-4, when being an old structure and much out of repair, and, as it is greatly exposed to the destructive ravages of the teredo, it has since required some repair almost yearly, to keep it in a passable state for traffic.

During the past season, it was found that the entire reconstruction of the pier head was necessary, as well as other general repairs to the structure and this was effected, during the past summer and fall, at a cost of $2,300. New bearing piles, caps, &c., were put in the bents; floor stringers, planking, &c., were renewed all over of pier head; its sides and ends were again close piled, after first putting in, for support of the walings, creosoted piles at about 5 feet centres, every fifth pile in the close piling being as well creosoted. New timbers were also put in on the west side of the roadway approach, besides making all other repairs required to put the structure in good and serviceable condition, and so as not likely to require repair for years.

BAY FORTUNE.

Bay Fortune, King's county, is situated on the south side of Rollo Bay, on the east coast of the island, and about five miles southwest from Souris, the eastern terminus of the Prince Edward Island Railway.

To improve the channel leading to the wharfs, situated on each side of the Bay Fortune river, the provincial government, some years ago, built a short breakwater on the eastern side of the mouth of the river, so as to contract the channel and thus, by increased scour, deepen the water over an obstructing sand bar at the entrance.

During 1892-3-4, the department extended the breakwater, repaired the inner or original work and connected it with the wharf. The work had a length in all of 850 feet, a width, for half its length, of 12 feet, and for the remainder, 20 feet, except the outer 20 feet, which is 40 feet wide. Considerable benefit is said to have resulted from the work, improvement having been made in the depth of water carried over the bar, and a larger class of vessels thus being able to enter.

During 1904-5, a brush and stone beach protection work was built northerly along the beach, from the inner end of the breakwater, for a length of 500 feet, where danger existed for a new channel being formed. Some wash and settlement occurred in this work, and its repair was effected during the past fall, at a cost of $49.75, the work done consisting in making up the low places with brush and stone.

BRAE HARBOUR.

Brae harbour, Prince county, is situated on the northern side of Egmont bay, at the mouth of the Brae river, about eight miles east of West Point and about six miles south of Coleman station, on line of Prince Edward Island Railway.

At the mouth of the river, there is a small area well sheltered by Brae Island, that carries a depth of about 5 feet at low water and which would prove a good fishing station and harbour of refuge for small vessels, as well as a most convenient shipping place for the district, were it not that approach to it is obstructed by a sand bar.

In 1890, the inhabitants of the district began the construction of a breakwater, for the purpose of contracting the entrance and thus causing an increased scour that would deepen the water. They built a work, 350 feet long, composed of brush, poles and some stone ballast, finished with clay on top, to form roadway. To this, the department, in 1892, added a length of 200 feet of somewhat similar work, and in 1898-9, added a further length of 100 feet, making the breakwater to have in all a length of 650 feet. While this gives good shelter for boats, landing and shipping facilities for small vessels, little improvement has been made in the depth of water carried over the bar at the entrance, and, to be completed, it will require some further extension either of the breakwater or the construction of a work from the point of Brae island. The original work, being of very poor construction and also too low, had to be repaired several times, and, as serious damages had been done to it, during the fall of 1905, provision was made for having it raised and repaired during the past season. Delay, however, occurred in the getting out of the materials and only a portion of the work could be done before winter. In all, the sum of $1,098.74 was expended in raising about 2 feet the inner 550 feet, which was also extended inward 25 feet, putting on face timbers and cross and longitudinal ties, and filling in roadway with broken stone and gravel. Materials required for the proposed raising, floor stringering and close pile fendering of the outer 100 feet have also been bought, but it was not possible to have work done before March 31, end of fiscal year.

CAMPBELL'S COVE.

Campbell's Cove, Kings county, is on the north side of the island, about nine miles west from East Point and fourteen miles northeast from Souris, the eastern terminus of the Prince Edward Island Railway.

In 1872, the place was selected by the provincial government for the construction of a small breakwater, 300 feet long and 30 feet in width, and it was built on the reef that extends from the western side of the cove, the inner end of the work being 70 feet beyond high water mark. As much benefit has been derived from the work, both by the fishing and farming industries, the Dominion government assumed control of the breakwater, in 1873, when the island entered confederation, and in 1882-3, besides effecting necessary repairs then required, extended the work a length of 250 feet seaward, filling in the 70 feet opening between its inner end and the shore.

The repairs and additions made by the department being of substantial character, the work remained in good condition up to 1889, when some slight repairs were required. After that date, however, principally owing to the ravages of the teredo, each storm caused more or less damage, and notwithstanding the extensive repairs effected in 1895, the work continued to suffer each spring and fall. In 1899, a length of 30 feet of the original work was completely carried away, and the adjoining 50 feet so badly damaged as to require reconstruction, which was effected in 1900-1. Repairs were also made in 1903-4-5-6.

During the past summer, the sum of $458.80 was expended in again opening a space of 70 feet, near the inner end of the work, for the intended purpose of having the tide clear out the deposit of sand that formed within the cove; but such improvement is doubtful.

During the severe storm of November 1 to 13 and December 1 to 3 last, it received most serious injury, the outer 90 foot block being carried away, besides other damages being done. The cause of the damage is direct action of the teredo, and further proves the uselessness of construcing works of native or unprotected timber on this part of the coast; creosoted timber or concrete being required into height of ordinary high water and imported hard and durable rock for ballast being as well required.

CHINA POINT.

China Point pier, Queen's county, is situated on the west side of Orwell river, near its entrance into Orwell bay.

Originally built by the local government, its control was assumed by the Dominion government in 1894. It has in all a length of 426 feet, consisting of shore abutment or approach, 140 feet long, of six blocks with intervening spans, and a pier head fronting 72 feet on the channel; it has a width of 37 feet, the channel face depth is 15 feet at low water, or 23 feet at H.W.S.T.

When assumed by the Dominion government, the pier, being a very old structure much out of repair, from time to time since required expenditures to be kept in passable condition for traffic.

During the past season, the sum of $589.46 was expended in raising and levelling up the pier head, putting in new face timbers, cross-ties, floor stringers, covering, &c., and further fender piling its face and ends; about one-half of the fender piles being of creosoted timber. The adjoining span and first inner block were also put in good condition and general repair made to the roadway on the approach.

GRAHAM'S POND.

Graham's Pond, King's county, is situated on the east coast of the island, about five miles south of the entrance into Cardigan bay, and about the same distance north of Murray harbour. The pond has a length of about half a mile, a width of from 600 to 800 feet, and, a short distance from the entrance, a depth of from 5 to 7 feet of water, at ordinary pond level, which is usually 1½ to 2 feet higher than ordinary low water, or 3 to 3½ feet below the height of H.W.S.T.

During the summer of 1900, a new channel was opened into the pond by the Department of Marine and Fisheries (existing one having gradually worked to the south), with a view, if possible, to admit of boats entering the pond at all stages of the tide; but, on the occasion of the first northeasterly storm, the new cut was found to be filling in again and working back to its original position.

In the fall of 1901, by instructions received from the department, the cut, that had been made by the Department of Marine and Fisheries, was cleaned out; a protection of brush, piling and stone was placed at its entrance and proved very effective in keeping the channel in the course desired, besides giving some small shelter for boats.

Extensions of the works have been made since each year and thus crib and pile piers have been built, 340 feet long by about 15 feet in width, on either side of the new channel formed. The distance between the piers is about 30 feet and gives good shelter and accommodation for fishing boats.

During the last summer, the sum of $699.39 was expended in adding a block, 30 feet in length and 20 feet wide, to the northern pier, and in raising and strengthening the outer end of the southern pier, which was raised about 1½ feet; its channel face was close piled for a length of 70 feet. Different portions of the works were as well further ballasted and strengthened.

HIGGIN'S SHORE.

Higgin's Shore pier, Prince county, is situated on Egmont bay, about ten miles north from Cape Egmont, and about six miles west from Richmond station, on the line of the Prince Edward Island Railway. The pier, which was constructed many years ago, by the provincial government, is one of the Prince Edward Island piers, control of which was assumed in 1884-5 by the Dominion government. It is 453 feet long with a width of 20 feet and extends out to a depth of about 2 feet at low water or 7 feet at high water spring tides.

The pier, as constructed, has close-faced timber sides and ends, well secured together with cross and longitudinal ties, while body of the work has been filled in with brush and stone, a roadway being formed on this with clay and gravel. It has latterly become unfit for use, owing to decay in face timbers and washout by storms, of the roadway filling, &c. Repairs were made during the past summer and fall; new face timbers were put on the sides, averaging 3 feet in height, over the whole length of both sides; the end was also rebuilt, longitudinal and cross ties put in and roadway made up with stone and gravel, at an expenditure of $1,676.77. Part of the material for a proposed extension of the pier was delivered at site during past winter, at a cost of $299.60, making the total expenditure for fiscal year $1,976.37.

HURD'S POINT.

Hurd's Point pier, Prince county, is situated on the southern side of Bedeque or Summerside harbour, about three miles south of Summerside, the shire town of the county. The pier is a most important shipping point, being about the only outlet for the surplus of a large and well cultivated agricultural district. It is also the regular calling place of the ferry steamer plying in the harbour, and which makes several trips daily to it from Summerside. The pier is 500 feet in length and 26 feet wide, excepting on the outer end or pierhead, where for 50 feet in length, it has a width of 65 feet. It is one of the Prince Edward Island piers, the control of which was assumed by the Dominion government in 1884-5, at which time, being an old work, the greater portion had to be reconstructed. Having of late years again got out of repair, small expenditures have required being made, that kept it in passable condition for traffic up to the past summer, when permanent repair of the inner pierhead and the adjoining 230 feet of the shore abutment was made; new cross-ties, longitudinals, floor stringers, covering, &c., were put in. Total expenditure was $1,570.49.

KIER'S SHORE.

Kier's Shore pier, Prince county, is situated on the east side of Richmond bay, about seven miles from Kensington, a village and station on the line of the Prince Edward Island Railway.

The pier, originally constructed jointly by the local government and the residents of the district, has a length of 1,033 feet, all of which was about 30 feet in width, until 1895, when the outer end, for a length of 50 feet, was widened to 40 feet, repair of all of the work being made at the same time and 2 feet added in height. During the past season, the sum of $1,341.94 was spent in widening to 40 feet a further length of 80 feet of the outer end of the pier, so as to provide required accommodation. In addition to this, the pierhead was newly floor stringered and planked and general repairs effected over the entire work.

LAMBERT'S PIER.

Lambert's pier, King's county, is situated on the southern side of the Montague river, immediately below the highway bridge, at the village of Montague, and about six miles from where the river enters Cardigan bay. The pier, which is a very old

structure, has a frontage of 310 feet on the river channel. It consists of two sections, the upper or western one, 140 feet long and 24 feet wide, constructed of cribwork on the inner side and pile-work outside; and the eastern section, 170 feet long, 25 feet wide, formed entirely of pile bents, capped, floor stringered and planked over. The inner side of the western section, as well as part of the eastern, is made up with ballast discharged from vessels, and connects with the bank of the river, forming good approach to the pier.

During the past season, $1,477.65 was expended in the entire reconstruction of the eastern section of the pier, and of about one-half the width of the western section, new bearing and fender piles being put in, with cap timbers, floor stringers, covering, and guard timbers. Greater portion of the bearing piles are of creosoted timber, while all the caps, floor stringers, &c., were treated with a good coating of 'carbolineum avenarium.'

MIMINIGASH HARBOUR.

Miminigash harbour, Prince county, is situated on the northwest coast of the island, about fifteen miles from North cape and eighteen miles north from West Point. Before its improvement by the department it was one of the numerous ponds along the coast, the channels from which emptied through low sandy beaches into the Gulf of St. Lawrence, and were constantly being changed in position when severe storms occurred, and at times became completely blocked up.

As the approach to Miminigash pond, however, was sheltered to a great extent by the Miminigash reef, this gave Miminigash pond such an advantage that it was considered superior to the other ponds on the shore, and the place was selected by the department as the best situation on the coast for possible formation of a small harbour.

Work was commenced in 1878, and has been continued at different times since, until now there is at the place, work consisting of breakwaters or piers on either side of the entrance, which has been put in a permanent position. Confining its width to 56 feet, the work, on the northern side, is 550 feet long, and on the south side, 400 feet long. Inward of these there are beach protection works to guard against channels being made through them, on occasion of high storm tides. A good roadway has also been made, 1,200 feet in length, over the sand beach that was difficult to haul over, the work done in all giving greatly improved shipping facilities, accommodation and shelter for fishing boats.

During the last year, the sum of $36.83 was expended in providing materials and effecting repairs on the covering of portions of the northern breakwater that had received damage during the storm of 1st to 13th November last.

MURRAY HARBOUR.

Murray harbour south pier, King's county, is situated at the head of navigation, immediately below the public road bridge on the South river, and about three miles inward from its entrance into Murray harbour. It is close to Murray harbour station, the terminus of the southern branch of the Prince Edward Island Railway.

The pier extends out from the north bank of the river, which is here about 300 feet wide, to edge of the channel, where a depth of about 10 feet of water is carried at low water spring tides, giving, with the rise of tides at spring, good approach for the largest vessels usually visiting the harbour.

The pier, as constructed by the provincial government, many years before confederation, consisted of an approach or shore abutment, 89 feet long, and an 'L' forming pierhead and having a length of 107 feet on channel, both the approach and pierhead being formed of timber blocks, all of which, excepting the shore end, was floor stringered and planked over.

Owing to natural decay of the top timbers and injury done to the below water portions by action of the ice and ravages of the teredo, the pier for some years had become unserviceable and unsafe for traffic, while danger existed of the blocks form-

ing the pierhead falling into the channel. Arrangements were made for its reconstruction; timber was got out during the winter of 1906, and work commenced in the spring.

Amount expended in 1905-6, $1,496.94.

During the last fiscal year the sum of $610.78 was expended in completing the reconstruction of the pier, which was finished satisfactorily about the 1st of September, the expenditure in all on the work amounting to $2,107.72. The work, as reconstructed, is of the most substantial character; creosoted timber was used for fender piling on its face and ends, and the floor ties, span beams, guard timbers, &c., were treated with 'carbolineum avenarium.'

NEW LONDON.

New London harbour, Queen's county, is on the northern coast of the island, about ten miles east of the entrance into Richmond bay and about nine miles west from Rustico harbour.

The harbour, sometimes called Grenville or New London bay, has within the entrance, which is about 1,200 feet wide, a length of about three miles and nearly same width, and receives the waters of 'Southwest,' 'Stanley,' 'French' and 'Hope' rivers. All these rivers are navigable for short distances and have at them wharfs or shipping places from which export is made of large quantities of produce during fall and spring. A large quantity of general merchandise, coal, lumber, &c., is imported by water, the district not having, as many other portions of the island, convenient rail facilities. The harbour is also largely used as a fishing station and harbour of refuge for fishermen.

For improvement of the entrance, which is obstructed by a shifting sand bar, works were commenced by the department in 1878, and these now consist of breakwaters, beach protection works on each side, that on the eastern side now having a length of 1,200 feet, while the western one is 460 feet. Their purpose is to confine the water, by preserving and extending the sand beaches, and thus, by increased current so caused, scour away a part of the bar. The result has been obtained to a most satisfactory extent, the depth of water being always much improved at such times as the works remain in good condition.

Since its construction, the western work has received no injury requiring repair or expenditure; but, as the eastern one is exposed to very heavy sea, on the occurrence of northerly storms, and also to a strong current and action of the ice, it requires some expenditure about yearly for its maintenance.

During the past season the sum of $231.95 was expended in repair and ballasting of portions of it, where washout and settlement had occurred. Materials costing $372.50 have also been provided during the past winter for the construction of portions of beach protections damaged by the late fall storms. Total expenditure during last fiscal year, $604.45.

PINETTE PIER.

Pinette pier, Queen's county, is situated on the south side of the Pinette river, immediately below and at right angle to the public road bridge, crossing the river. It was connected with the bridge by a span 28 feet in length.

The pier is 120 feet long by 28 feet in width, and constructed of close-faced timber work, being floor stringered and planked over; it faces on the river channel, where a depth of 8 feet is available at low water. As it is a very old structure, repairs have from time to time been required to keep it in passable state for traffic.

Latterly, considerable settlement has occurred in the work, owing to action of the ice; its bottom was also much destroyed by the teredo. Levelling up and raising of the top was required, the floor-stringers, covering, guard timbers, &c., as well being decayed needed renewal; all of which was effected as well as protecting the channel

face with fender piling and filling in the space between the pier and bridge with a solid block. Total cost, $1,000.60.

PORT SELKIRK.

Port Selkirk pier, Queen's county, is situated on the south side of the Orwell river, near its entrance into Orwell bay, and is distant, by water, about twenty miles from Charlottetown.

The pier is in the form of a 'T,' consisting of a pierhead, 250 feet long, and 35 feet in width, fronting on the edge of the channel, and an approach, 250 feet long and 23 feet wide. The whole pierhead and the outer part of the approach are composed of a series of blocks and spans floor-stringered and planked over.

During the past season, the sum of $82.33 has been expended in general repair of the plank covering of the pierhead and approach, putting in new floor-stringers as required, renewal of bearing and fender piles, former being a creosoted timber, and the rebuilding of portions of the faces of the roadway approach.

ROBINSON'S ISLAND.

Robinson's island breakwater, Queen's county, is situated on the eastern side of the entrance to Rustico harbour and on the western end of Robinson's island, which extends in an easterly direction, for a length of about three miles, to what is known as Little Rustico harbour, where only small fishing boats can enter.

The island consists principally of low, sandy beaches with high sand hills ranging along their centre, excepting at the eastern end, where a small portion is under cultivation. On the northwestern side of the island, the department, in 1883, built a work, 450 feet in length, for the purpose of contracting the entrance so as to cause, by the increased current, improvement in the depth of water carried over the sand at the entrance; but the work being of too slight construction was shortly afterwards carried away.

Marked changes have since taken place in the channel and beaches since both works were constructed, there being a depth of 7 feet at low water on the shoalest part of the bar, or 10 feet at H.W.S.T.

For the further improvement of the harbour's entrance, a contract was entered into July 4, 1905, for the construction of a breakwater, 750 feet in length, extending in a northeasterly direction from western end of the island, its outer end to be distant about 1,000 feet from the outer end of the northern work.

The inner end of the new work was to be constructed, for a length of 200 feet, of roung log open cribwork, 13 feet wide, having cross-ties and fender piles at 10 feet centres; it was to be ballast-floored on lower cross-ties and be solidly filled with ballast. For a further distance of 500 feet, the intended width was 18 feet and it was to be of piling secured to walings, solidly filled in with brush and stone, planked, &c., outer 20 feet being of similar construction but 26 feet in width.

This work that was commenced in the latter part of July, 1905, but suspended about end of September of that year, was recommenced during the past summer and continued up to the end of October last, at which time all of the length was carried out so far as the piling and greater part of the covering was done. Work was again resumed in March last and ballasting about completed.

Expenditure during 1906-7, $6,532.50.

RUSTICO.

Rustico harbour, Queen's county, is on the north side of the island, about midway between East Point and North Cape, and is one of the most important fishing stations.

For improvement of the entrance, which is obstructed by a shifting sand bar, the department, during 1881-2-3-4, constructed a breakwater on the north side, for the

purpose of confining the current at ebb tide, and thus by scour deepening the water, besides forming protection to the low beach, on which are situated most of the fishing stages and houses of the fishermen.

The work, originally 1,240 feet long, was composed partly of solid close faced timber work and partly of pile, stone and brush work. The piles in this having been completely decayed, the work was unable to withstand the severe storms and high tides of 1st to 13th November last, and, for a length of 400 feet, was completely carried away, endangering the safety of the fishing houses and stages. Temporary repairs were effected by constructing a breast work of brush, poles and ballast, which have accumulated the drifting sand to such an extent that, with some little additional work, the protection may prove sufficient. Expenditure, $427.75.

STEPHEN'S PIER.

Stephen's pier, King's county, is situated on the southern side of the Montague river, about six miles below its entrance into Cardigan bay and immediately below Lambert's pier and Montague bridge.

It consists of two wings or approaches, about 50 feet apart, and extending out from the bank of the river to the edge of the channel, where the pierhead has a frontage of 100 feet. The wings or approaches are respectively 90 and 115 feet long and are formed of close faced timber work, the space between them being filled with brush and ballast discharged from vessels, gravel and clay being placed on top to form roadway. Pierhead is formed of pile bents, capped, floor stringered and planked over; a guard timber is placed on face and ends and fender piles are put in.

The bearing piles in the bents having become unsafe, through the action of the teredo, their renewal was effected during the past summer; general repair of the capping floor stringers and covering was also made, at a cost of $263.98 against the work, this principally for labour.

As the greater part of the floor stringers, capping and covering had been procured at the time, similar materials were being got out for Lambert's pier and charged to it, the foreman being the same on both works did not separate the different accounts. Timber used for the piling in the bents forming the pierhead is creosoted and was also supplied to the work out of a quantity of creosoted piling that had been provided and delivered at Charlottetown for use generally in repair and strengthening of the Prince Edward Island piers.

ST. PETER'S BAY.

St. Peter's bay, King's county, is entered from the Gulf of St. Lawrence, about thirty-five miles west from East Point; it is of considerable extent, running inland about eight miles, with an average width of three quarters of a mile, and carrying over it at low water a depth of from 2 to 3 fathoms.

The entrance, however, being obstructed by a shifting sand bar and having over it only from 6 to 7 feet at low water, renders the bay now only available for vessels of small size. To improve the water over the bar, where it is said that in 1860 there was a depth at low water of 9 feet, works were commenced in 1878 by the department on the west side of the entrance. They now consist of a breakwater, 256 feet long, built of close-faced solid timber work, fully ballasted, floor stringered and planked over; its inner end connects with beach protection which is composed of round long open cribwork, filled in with brush and ballast and 1,420 feet long, extending across the beach to the high ground, so as to prevent a channel working through on its inner side.

In 1883, it was proposed further to contract the width of entrance by the construction of a breakwater, 1,900 feet long, extending from the eastern beach; but the contractor abandoned the work, when less than half built, and for years little has remained of the part built.

The matter of improving the entrance again having been taken up by the department, a contract was entered into with Messrs. Lachance & Kennedy, of Ottawa, Au-

gust 3, 1905, for the construction of a work, 900 feet in length, to extend from the end of the east beach towards the outer end of the western work.

Further than getting out some materials, nothing was done up to about the latter part of May, 1906, when driving of the bearing piles was commenced. Getting these in and putting on one set of walings, cross timbers at 10 feet centres on the outer 625 feet length of the work have been effected by the 30th June last.

Since then the work done has consisted in the construction of the inner 275 feet, composed of cribwork; this yet requires ballasting. The two further necessary walings and cross-timbers at 5 feet centres were put on over a length of 200 feet, and sides on the same were close piled, space between being partly ballasted. All of the season had been stormy, much preventing the progress of the work, while the storm that set in November 1 and continued up to November 13 prevented anything further being done for the season; this storm, while carrying away some of the materials that had been provided for the work, as also doing injury to scows, &c., in no way injured the work. A further storm and high tide that occurred December 1-3, however, did much damage, carrying away a length of 130 feet of the bearing piles, walings, &c., immediately outward of the part of the work where the close piling had been done.

During the past winter so much injury was done by action of ice and scouring as will require the removal of bearing piles, walings, &c., on a length of 375 feet of outer portion. On the western side of the entrance the sum of $299.45 was expended in making up with brush and stone a washout that had been caused in the beach protection works by the storm of November 1-3.

Total expenditure during the fiscal year 1906-7, $3,896.95.

SUMMERSIDE HARBOUR.

Summerside harbour, Prince county, is on the southerly coast of the island. The town of Summerside is in population next to Charlottetown, with 3,000 inhabitants, the second place in importance for shipping, and one of the principal stations on line of the Prince Edward Island Railway, by which it is distant from Charlottetown forty-nine miles, and from Tignish, the western terminus, sixty-eight miles.

During the season of navigation, daily communication is had with the mainland by the steamers of the Prince Edward Island Steam Navigation Co., at Point Duchene, where connection is made with the Intercolonial Railway, and so with all parts of Canada and the United States.

The entrance into the harbour, between Indian Head and Phelan Point, is about one and a half miles wide. A sand spit, however, partly dry at low water, extends about 3,200 feet from Indian Head, the water also being shoal for a distance from the opposite shore, so that the deep water channel carrying 18 feet of water is only about 500 feet wide opposite the lighthouse, which is situated on the north side of the sand spit, outward of Indian Head; inward of this the channel in the harbour, to the railway and other wharfs at the town, is from 400 to 1,200 feet wide and has a depth of from 23 to 30 feet at L.W.S.T.

For the improvement of the channel, as to depth and direction, dredging at different times has been done by the department, while, for protection from southwest winds a contract was entered into February 27, 1906, for the construction of a breakwater to extend 3,220 feet from Indian Head to the outer side of the sand spit on which the lighthouse is situated.

The work, which is to consist of a cribwork core, 10 feet wide on top, is to be entirely covered with stone, forming a rubble mound four feet wide on top, and five feet above H.W.S.T.; it will be provided with a slope, on seaward side, of 2 to 1, and on the inner side 1½ to 1.

The length of the stonework is 3,200 feet, with an outer block measuring 112 feet long by 20 feet wide on top, constructed of close-faced timber work fully ballasted

and having slope of 1 to 1 on its seaward side and ends; all of the timber below water is creosoted. Work, which was commenced early in May, was continued up to about the middle of November, when a length of 700 feet of the cribwork core had been placed in position, and considerable portion of the rip-rap work done. The necessary creosoted timber for outer block has also been delivered.

Expenditure during 1906-7, $5,848.04.

VICTORIA PIER.

Victoria pier, Crapaud, Queen's county, is situated at the head of navigation, inward of Crapaud basin, at Victoria village, which, after Summerside, is the most important port of shipment on the southwestern coast of Prince Edward Island. It is about midway between Charlottetown and Summerside harbours and about eleven miles distant south from Emerald junction, on the line of the Prince Edward Island railway.

The pier has a length of 468 feet consisting of shore abutment or approach, 286 feet long and 20 feet wide, middle section, 143 feet long and 37 feet wide, and a pierhead, 57 feet long and 58 feet wide.

With the exception of the approach, which is built solid, the work was composed of alternate blocks and spans, floor stringered and planked over. The pier is one of the Prince Edward Island piers, control of which was assumed by the Dominion government in 1884, and, being at the time an old structure much out of repair, it has since required expenditure at different times.

During the past season the sum of $1,695.96 was expended in general repairs, and in filling in solidly what had been formerly spans on the middle section.

WOOD ISLAND.

Wood island, Queen's county, the most southerly part of Prince Edward Island, is situated about thirty miles southeast of Charlottetown and about fifteen miles westward from Cape Bear. Originally two small islands, they are now connected together as also to the shore by sand beaches; there is a sand spit extending out from the shore to within 300 feet of the eastern island.

The formation of a shipping place was commenced here by the provincial government in 1859, but, as at no time were the works in good condition, little, if any benefit resulted from them until 1894, when reconstruction of the northern breakwater was effected by the department, and the southern one repaired. This latter has since been extended, having now a length of 950 feet; the length of the northern one is 2,500.

Since July 1 last, an expenditure of $1,250.99 has been made at the place in effecting the repair of the outer end of the north work, that has been damaged by ice during the winter, in building a jetty, 70 feet in length and 15 feet in width, from the side of the south work outwards to the channel, also in adding length of 40 feet to jetty built last season. The purpose of these works is to contract the channel and cause, by scour, improvement in depth of water, which result has been obtained.

NEW BRUNSWICK.

ANDERSON'S HOLLOW.

Anderson's Hollow, Albert county, is a cove of Salisbury bay, on the northwest side of Chignecto channel in the Bay of Funday. Spring tides rise 40½ feet; neaps, 32½ feet.

The breakwater wharf at this place was begun in 1879 by the construction of a detached block 550 feet from the shore with which it was afterwards connected. In

August, 1885, the work was 290 feet in length, and three years later was carried to the shore. The structure, 25 feet wide on top, was originally 27 feet high at the outer end; but, the bottom having been raised by the accumulation of the littoral drift, the height is now 3 or 4 feet less. It is built of round timber cribwork, lightly battered on the inside, but sloped at the rate of ½ to 1 and sheathed on the weather-face.

The breakwater was damaged by storm on November 21, 1895, when a small light-house placed at the outer end was swept away, together with part of the break, while some of the top work at the head was simultaneously shaken and started.

In 1895-6 a small sum was applied in bolting loosened timber for temporary security.

Repairs and improvements were made in 1897, 1899, 1902, 1903 and 1904.

Like many other works in the Bay of Fundy, Anderson's Hollow crosses the direction of the flood stream and of the prevailing winds. In consequence an accumulation of littoral drift is found on the southwest side, which travels round the end, and is deposited under the lee of the breakwater, forming a shoal which is an obstacle to vessels.

In 1904-5, an extension was completed, sheathed, covered, ballasted and fendered; one new ladder was made and placed in position; a quantity of sheathing was re-bolted; 5 new fenders were placed; 700 lineal feet of pieces of covering were laid; 35 feet of new cap were placed; 1 new mooring post was put in and the break was rebuilt for 72 lineal feet.

The steep approach to the wharf was besides improved by lowering the rock cutting 4 feet, by widening it to 14 feet and by making an embankment 21 feet wide, supported on both sides by retaining walls of stone, each 33 feet long, 9 feet in mean height and 2½ feet in mean thickness, containing 55 cubic yards of dry masonry.

In 1905-6, from 80 to 90 new pieces of sheathing were laid on the battered face; 13 ribs were bolted to strengthen the break; 7 fenders were secured; 2 new mooring posts were placed in position and a bed for vessels was made alongside the work. A dike of brush and stone, 420 feet in length, containing 155 cubic yards, was besides built to lead the stream to scour the shoal.

In 1906-7, brush and heavy stone were placed on the dike to strengthen it, and 3 mooring posts, for the work, were procured.

The expenditure during 1906-7 amounted to $98.17.

BUCTOUCHE HARBOUR.

Buctouche Harbour is separated from Northumberland straits by a sand beach from six to seven miles long. At the southern end of the beach is the entrance to the harbour. The northern end of which are important fishing grounds, is connected with the mainland.

The inhabitants of the northern end of the harbour are practically debarred from outside fishing by the distance from the village around by the harbour entrance to the fishing grounds, and there is no shelter for boats on the outside shore. It is therefore proposed to make a cut through the beach at its northern end— the narrowest part— the width there being only about 500 feet.

Work was begun in May 1905, and by the close of the fiscal year 1905-6, a stake and brush breastwork, 2,800 feet long, had been built to raise the low parts of the beach formerly washed by storm tides; a row of close piles 219 feet long had been driven to retain the slope along the north side of the cut; the timber work of the north breakwater, 216 feet long, had been completed; and the piles of the south breakwater, 143 feet long, driven. About 4,000 cubic yards of sand had been removed from the site of the proposed canal by scrapers and hand labour.

The inner 35 feet of the breakwater is 4½ feet wide and formed of two rows of piles, driven 4 feet centre to centre, and filled between with brush. The outer portions are 11½ feet wide out to out, are close piled on the outside and have two rows of main

piles driven 6 feet centre to centre and connected with walings and cross ties of square timber.

During the fiscal year ending March 31, 1907, the timber work of the south breakwater was completed ; tracks for the trolley were laid on both breakwaters and they were filled with brush and stone; 324 close piles driven to continue the breastwork along the north side of the cut, and 75 piles 6 feet apart and 10 feet to the rear of the close piles to support the braces. The braces were bolted to the rear piles and to a waling which was bolted to the close piles throughout the whole length, 452 feet of the breastwork, and brush was placed behind the close piles. 200 pickets were driven over a length of 306 feet, for an inner breastwork lengthwise with the beach, and brush was placed between the pickets. 91 cubic yards of small and 100 of large stone were procured for filling and placing outside the breakwater.

The expenditure for the fiscal year ending March 31, 1907, was $1,998.82.

CAMPBELLTON.

Campbellton, a thriving town of about 3,800 inhabitants, is situated on the southern side of the Restigouche river, sixteen miles above Dalhousie and six miles below the head of the tide. It is a divisional station on the Intercolonial Railway and an important deal port.

Between 1889 and 1892 a departmental wharf was constructed at Campbellton, extending 250 feet easterly from what was lately known as the Shives' wharf. The latter has since been expropriated, and repairs on its front and for 46 feet of its westward face, begun in 1903-4, were completed in July, 1904, thus giving to the government wharf a frontage on the river of 340 feet.

In October, 1904, a contract was entered into for the construction, on a foundation to be dredged to 22 feet at low water, of a deep water wharf 304 by 35 feet, extending easterly from the original departmental block with which it is connected by a span 19 feet long on the outer face. The contract price was $35,300. Construction was begun on June 12, 1905, and by June 30, 1905, one crib (140½ by 41 feet at bottom) had been built to a height of 12 feet 3 inches. The site was dredged in July, 1905, and at the close of the fiscal year 1905-6, the work remaining to be done under the contract consisted of laying the cap, covering, stringers and upper two to three tiers of face timbers of the fenders for about 230 feet on the western end; placing the upper lengths of the fenders, eight mooring posts, the ladders and ring bolts and the ballasting. The wharf was completed on September 19, 1906. Its dimensions as finished are 306·8 feet long by 35·2 feet wide.

On February 28, 1906, a contract was entered into with Mr. William Glover for the construction of a wharf, 200 feet long and 75 feet wide, to be built as a western extension to the government wharf. The contract price was $16,495.

At the close of the fiscal year 1905-6, the cribwork was practically completed, 271 feet of the cap, two-thirds of the covering and nearly all the stringers were laid. Piles were driven along the western end and for part of the front face, and hardwood sheathing placed along 70 feet of the rear; three mooring posts were placed.

The work, which is intended for interprovincial or coasting traffic, gives a depth of 9 feet at extreme low tide along the outer face. It was completed on September 8, 1906.

Instead of continuing the repairs on the westward face of the Shives' wharf (so-called) shoreward, a narrow wharf was built during the winter and spring of 1906, by day labour, outside it on the line of the westerly side of Ramsay street. This wharf is 258 feet long 15 feet wide on top. The inside face is of open cribwork and has a batter of 1 in 4, the outside face is sheathed with hardwood and has a batter of 1 in 12. The outer end of this work connects with the inside face of the western extension. About 24 feet of sheathing, a small quantity of ballast and three ladders were still required on the work at the end of June, 1906. The wharf was completed in the fiscal

year 1906-7, and a low cribwork wall 128 feet long filled behind with bark and earth was added at the inner end to form an approach from Ramsay street.

In the spring of 1906, a considerable amount of material was deposited by the town in the space between the new wharf and the old face. The filling was continued by day labour during the fiscal year 1906-7, a large quantity of cedar bark, earth, and brush being obtained for the purpose; and the space is now nearly filled, adding an area 258 feet long and from 15 to 48 feet wide to the government property.

On the easterly side a cribwork was built during 1906-7 by Mr. Wm. Glover at a cost of $2,880 to fill in the angle between the Shives' wharf (so-called) and the original departmental block to allow of a second railway siding being laid out to the deep water wharf. The work was begun on July 7, 1906, and completed on October 29. It is 148 feet long on the outside face, which is sheathed with 4-inch plank; the general width is 19 feet, decreasing at one end to 1½ feet, and the height varies from 12·5 to 21·6 feet. The top is finished with earth and gravel.

From the inner end of this cribwork, the remaining 196 feet of the eastern face of the Shives' wharf, which before on this face consisted of open bays of cribwork scarcely ballasted and not covered, was raised and levelled, by day labour, with two additional face timbers, a cap and 17 cross ties. The interior was filled with from 5 to 8 feet in depth, of ballast, cedar bark and earth; the outside was sheathed with 4-inch plank to the top of the cap, and 5-ring bolts and two ladders were set on the face.

The levelling of the old wharfs to bring them to the elevation of the new, *i.e.*, to 4 feet above H.W.O.S.T., was continued along the original departmental block, on both sides and on the river front of the Shives wharf. Additional face timbers were added and short pieces of fenders were scarfed off the old. The interior of both wharfs and also the corner between the new cribwork for the railway siding, and the old wharfs, were filled and levelled with brush, bark, ballast, earth and gravel. The winter closed in before the surfacing was quite completed, and on the outside face of the original wharfs a length of about 140 feet still requires an additional face timber, the cap, and upper lengths of fenders to complete the levelling.

On the above work about 2,600 cubic yards of cedar bark, earth and gravel, were used, besides a large quantity of brush. The work was done by day labour.

On February 11 the construction of a warehouse was begun on the western extension. The building is 110 feet long and 40 wide, with side walls 16½ feet high, and a pitched roof with sides sloping at the rate 1 to 1, supported on eight trusses of 40 feet span. The work is being carried on by day labour. By March 31 the sides had been boarded in ready for shingling and the roof was ready for the asphalt roofing. The 2-inch flooring was completed.

The expenditure for the fiscal year ended March 31, 1907, amounts to $31,111.40, including $10,354.33 for dredging.

OLD FERRY WHARF.

To provide a landing for the ferry steamer plying between Campbellton and Cross Point, Bonaventure county, Quebec, the department, between 1889 and 1894, constructed a ferry wharf 406 feet long on a site selected by the town council.

This has not been used for some years as a ferry landing, as the site was unsuitable, and a new landing giving only sufficient room for the ferry boat has been built elsewhere.

The old wharf is, however, much used by boats from the surrounding districts, both of Bonaventure and Restigouche counties, and as it was in bad condition and the outer end had been carried away, repairs were undertaken by the department in the spring of 1896. Previously, the inner 250 feet of the wharf had been filled with earth, &c., by the town council, to make it passable for teams.

During 1905-6, the remains of the old planking were removed on the outer 100 feet, new 10-inch by 10-inch cap timbers and ten new fenders were placed along the sides; two

old spans were logged up at the sides, and the interior of the outer 100 feet as well as parts of the inner were filled and surfaced with cedar bark, clay and gravel.

During the fiscal years 1906-7, these repairs were continued, the outer 55 feet of the wharf was built and levelled up with new cribwork, which at the end is 10·8 feet high, giving the wharf a total length of 373½ feet, filled with stone ballast. An old block, 84½ by 11 feet, at the northwestern corner of the ferry wharf was also repaired. The cribwork was strengthened by the insertion of new timbers and by extra bolting; the interior was filled with stone, bark and earth, and surfaced with gravel; a cap, 6 new fenders and 18 feet of new sheathing were placed around the work.

The expenditure for the fiscal year 1906-7 is included under the item for day labour, in the Campbellton report, and amounts to about $450.

CAPE TORMENTINE.

Cape Tormentine is situated on the southwestern side of Northumberland straits, at the extreme eastern end of Westmoreland county. It is the terminus of the New Brunswick and Prince Edward Island Railway, and the nearest point of communication between Prince Edward Island and the mainland, there nine miles apart.

To form an artificial harbour for purposes of interprovincial communication between the island and the mainland, a breakwater pier was constructed by the department between 1886 and 1892.

The structure comprises a straight pier or approach, 2,500 feet long (the first 1,300 feet of which is a rubble mound and the remainder close-faced cribwork) and a pierhead and 'return' each 400 feet long, of close faced cribwork. The outside faces of the head and 'return' were, from about low water level to the top of the work, built with a slope of 1 to 1 which was sheathed with hardwood. The whole incloses a harbour of an area of about four acres and a depth, up to the autumn of 1892, of 13 to 15 feet at low water, but which has since been increased in parts to 18 feet by dredging.

Spring tides rise 7¾ feet, and neaps 3¼ feet.

Owing to the ravages of the teredo, repairs became necessary to the timber section of the work soon after its completion and have since been carried on annually. They consisted up till 1901 mainly of renewing the face timbers and sheathing of the sloping faces of the pierhead and 'return,' and protecting the north and a portion of the south faces of the approach, and about 300 feet of the outer face of the pierhead with large and small stone, which is still in progress, and driving hardwood close piling along a portion of the inside of the approach and, later, creosoted 12-inch by 12-inch piles about 2½ feet apart around the harbour side of the work.

In 1901-2, a temporary quay face 205 feet long was constructed of piles, hardwood walings and cross ties, along the outer or south face of the 'return' for the winter steamer service between Prince Edward Island and Cape Tormentine. A combine station and freight shed, 100 feet by 25 feet, was built on the 'return.'

In 1902-3, the remains of the old slope at the southeast corner of the pierhead were replaced with double close piling and walings, and the timber of the breakwater, which had settled considerably, was raised and levelled for 750 feet of the approach, to bring the top of the flooring 4 feet above H.W.O.S.T.

In 1903-4, this latter work was continued throughout the approach and for part of the pierhead. On a section of the pierhead 49 feet long, next the corner rebuilt in 1902-3, the old timbers were removed nearly to low water level, on the outside, and the work was rebuilt with a vertical face, consisting of piles, walings and cross ties, tied into the old work and protected by creosoted piles driven close. The top was levelled at 4 feet above H.W.O.S.T.

In 1904-5, this vertical face was continued northerly 45 feet, the new section being completed, except for the close piling, ballast and covering. The same work was undertaken to replace the old slope on the 'return,' where a length of 50 feet at the southwest end was completed, except for close piling, ballast and covering; and a further length

of 50 feet begun. Sixty-three feet of the quay face was rebuilt permanently, being faced with creosoted close piles and filled with ballast. The levelling of the pierhead was completed over the remaining length of 250 feet.

In 1905-6, the placing of the walings, longitudinals and cross ties at the second 50-foot section of the 'return' was completed and the remainder, 79 feet long, of the old slope was removed and the face rebuilt in the same way. Seventy feet out of the whole length of 179 feet was faced with 12-inch by 12-inch creosoted close piles. The top was levelled and the covering partly laid. On the quay face a length of 48 feet was brought up to the level of the new work and 12 by 12 creosoted piles were driven close for a length of 70 feet. Minor repairs were made and timber and iron, at a cost of $1,080 were procured towards a continuation of the work.

During the fiscal year ending March 31, 1907, the last sections of the 'return' were levelled. One 95 feet by 5 feet behind the freight shed, required only extra stringers, covering and cap.

In the second, 104 feet by 16 feet, in front of the freight shed, 21 spruce piles were driven inside the work, and outside, for 55 feet of the length, creosoted close piles were driven. For 48 feet the work was filled with ballast and covered with 5-inch plank, and a cap was laid and screw-bolted in the creosoted piles. The remainder was temporarily covered with 3-inch deals.

A strip of 5-inch hardwood sheathing, 164 feet long, was placed horizontally, reaching from the top of the cap to about half tide level, outside the creosoted piles to protect them from damage by ice and vessels.

Four hundred and fifteen cubic yards of ballast were procured for use when the remainder of the close piles can be driven.

The freight shed was repaired and partly sheathed with 3-inch deals.

Two hundred and fifteen 12 inches by 12 inches creosoted piles were procured at a cost of $5,867.32.

The expenditure for the fiscal year 1906-7 was $9,996.88.

CARAQUET.

Caraquet is situated on the south side of Baie des Chaleurs, forty-two miles east of Bathurst. It is an extensive and prosperous fishing village and settlement, with a population of about 4,000 and with the exception of Bathurst, is the most important station on the Caraquet railway.

In March, 1902, a contract for a deep water wharf, for the shipment of lumber from Gloucester county, was entered into.

The wharf is built of round timber in open cribwork. It is 1,700 feet long and consists of a shore block 255 by 25 feet, 25 blocks 25 feet square, 26 spans of 20 feet, and a pierhead 300 by 40 feet. The latter rests on a foundation which was dredged by the department in 1903, to 22 feet at low water.

The contract price was $59,990.

The wharf was begun on July 7, 1902, and completed on October 31, 1905.

During the fiscal year 1905-6, two ice-breakers were built as a protection to the blocks of the wharf, and some slight damage to the pierhead caused by ice was repaired.

The work of grading and fencing the right of way, 1,200 feet long, from the wharf to the public road was begun in June, 1906, 450 cubic yards of earth and rotten stone, all requiring picking, were removed during that month.

Work on the right of way was continued and completed during the fiscal year ending March 31, 1907, 131 rods of wire fence and five gates were erected in all, and the total excavation amounted to about 2,300 cubic yards. Two culverts of 12 inches vitrified pipe were laid under the road with small rough masonry abutments, at the ends, and deep off-take ditches.

Eight iron plates were placed around the two outer corners of the pierhead of the new wharf; they are 2 feet by 8 feet by ⅝-inch and are secured each with twelve ¾-inch by 8-inch bolts.

The expenditure for the fiscal year ending March 31, 1907, was $2,590.10.

CHANCE HARBOUR.

Timber required to build a small inclined breakwater, partly submerged at high water, at this place, a cove in the Bay of Fundy, eighteen miles west of St. John, was delivered, and the work was begun in the spring of 1905. By June 30, in that year, the outer end had been built to a height of nine tiers and ballasted, the bottom tier being 80 feet in length.

In 1905-6, the work was brought up to sixteen tiers in height at the outer end, and four tiers at the inner end, besides being extended to a length of 168 feet, the covering being laid for a distance of 60 feet.

In 1906-7 the work was raised four tiers and ballasted.

The expenditure in 1906-7 was $548.60.

CHOCKFISH.

Chockfish is a fishing and farming settlement at the mouth of the Chockfish river, which empties into Northumberland straits, about midway between Richibucto and Buctouche.

The works at Chockfish are intended to straighten the channel at the mouth of the river, which was formerly obstructed by shifting sand bars, and to render it deep and stable, and thus afford a safe entrance and harbour for fishing boats. They consist of a dam, closing the old deflected channel, and north and south breakwaters. The dam is 356½ feet long, it was begun in 1901-2, and extended in 1902-3. The north breakwater was built for a length 516 feet in 1903-4, and extended 50 feet during 1906-7. The south breakwater, begun in 1904-5, has a total length of 264 feet, of which the outer 50 feet was built in 1906-7. It is a continuation of the dam. An opening 44 feet wide is left between the two breakwaters.

The extensions built during 1906-7 are both 11 feet 6 inches out to out, and consist of two rows of main piles placed 6 feet centre and 10-inch by 10-inch walings. They are close piled on each side and filled with brush and stone. A new track, of plank, for the trolley was laid on the south breakwater.

The expenditure for the fiscal year ending March 31, 1907, was $1,498.96.

COCAGNE.

Cocagne lies on the Northumberland straits, ten miles south of Buctouche. It is the port of the parish of Dundas, a farming, fishing, and lumbering district of about 3,500 inhabitants.

In 1881-2, the department began the construction of a cribwork wharf, 400 by 20 feet, leading from the highway bridge across Cocagne river, and with a depth of water along its outer face of from 9 to 11 feet.

The width for part of the length was increased to 40 feet in 1888 and 1892.

Repairs were undertaken in 1898-9 on a part 22½ feet wide and 176 feet long (the remainder of the 400 feet, which had gone into decay, being removed) and this section was widened by placing stone along the bank for a width of ten feet on top of the old structure. The stone has since settled, and to give room for teams to turn on the wharf and more space for freight, it was proposed to widen the wharf by adding cribwork to the old part, to bring it to the level of the new.

This was done during the fiscal year ending March 31, 1907, when two tiers of round timber, five rows of 9-inch stringers, 3-inch covering, and 9-inch by 10-inch cap, were laid over a section of the old work 92 feet wide. Forty-three cubic yards of ballast

were placed in the outer end of the built-up portion, and four ring bolts and a ladder along the face.

The expenditure for the fiscal year 1906-7 was $396.68.

DALHOUSIE.

Dalhousie lies at the head of the Baie des Chaleurs and the mouth of the Restigouche river, sixteen miles below Campbellton. It has a population of about 1,200 and is an important deal port. Dalhousie harbour is during the season of navigation, one of the best in the province, being well sheltered and having a depth of from four to seven fathoms at low water.

At the terminus of a branch of the Intercolonial Railway, the department constructed in 1887 a wharf 300 feet long, 22 feet wide on top, giving a depth of 14 feet at low water. This depth has since been reduced through ballast having been washed out of the work.

On August 1, 1904, a contract was entered into for the construction of a deep water wharf, 304 by 35 feet, built on a foundation dredged to 24 feet at low water. This work lies immediately above the old government wharf. The contract price was $42,000.

In August 1905, the dredging required under the contract was performed, and on January 22, 1906, the cribwork was begun. By June 30 the cribs had been sunk and filled with ballast, and the upper ballast floor was laid. The superstructure beginning about the centre of the work was carried up to within five tiers of the full height, at the eastern end.

The wharf was completed on October 18.

On January 8, 1907, work was begun on a connecting block between the old and new works. An opening of 20 feet is left between the deep water wharf and the block, to be spanned with 12 by 12-inch stringers and covering. The block is of round cribwork with double timbers faced and close-piling on the exposed faces.

Its inner side is contiguous with the old work throughout.

It will be 220 feet long and 56 feet wide at the upper end decreasing in width to a point at the lower end to give, with the deep water wharf, a straight face of 550 feet.

Dredging by the *St. Lawrence* on the site of the new block in the season of 1905, produced a depth of 17 to 20 feet at low water along its face.

By March 31, 1907, the block had been built to an average height of 1½ feet above high water.

The expenditure, for the fiscal year 1906-7, was $22,394.40, being $8,700 on the contract for the deep water wharf, $13,200 on the connecting block and extra under the contract and $494.40 for inspection, &c.

DIPPER HARBOUR.

In 1904-5, a contract was let for the construction of a new breakwater, (the old one built in 1873 having been carried away in the same year), at Dipper Harbour, a fishing station on the Bay of Fundy, twenty miles west of St. John. The work, to be 335 feet in length and 43 feet high at the outer end, the whole surmounted by a parapet, is intended to replace an old breakwater, and to give shelter to the fishing boats of the neighbourhood. By June 30, 1906, the superstructure, at the inner end, had been brought up to the level of the under sides of the stringers; while the cribs of the outer end had been sunk in place and built to within 8 feet of high water.

In the year 1906-7, the contract was completed.

The total expenditure to June 30, 1906 (including $22,244.52 for the old breakwater) amounted to $44,583.91.

The expenditure for 1906-7 was $23,964.74.

DOUGLASTOWN.

Hutchinson's wharf, Douglastown, lies on the north bank of the Miramichi river about three miles below Newcastle. About 10,000,000 F.B.M. of lumber are exported annually. At the wharf from which this is shipped the depth at the face was only about 14 to 16 feet at L.W.O.S.T. Forty feet out, the depth increases to from 18 to 20 feet.

Vessels were in danger of being strained at low water and would settle so far from the wharf as to cause difficulty in loading.

Therefore during the past season dredging to a total amount of 2,905 cubic yards was carried on by the *Peter England* dredge, at a cost of $939.

A depth of about 20 feet at L.W.O.S.T was obtained along the face of the wharf.

DURHAM.

Durham, the most easterly parish of Restigouche county, has a population of 2,200 occupied in lumbering, farming and fishing.

For the protection of the fishing boats and to facilitate the shipment of lumber, a contract for a breakwater was entered into on June 20, 1905, with Messrs. John and Joseph Goulette.

On October 23, 1905, the contract was transferred to Messrs. J. & A. Culligan. The contract price was $17,700.

Work was begun on September 1, 1905, and by June 30, 1906, all the cribs of the approach had been sunk in place, the covering was laid for a length of 216 feet, stringers for 245 feet, and the round timber work was complete for 273 feet, the upper ballast floor was laid for 405 feet, the sheathing was complete for 165 feet, and the fenders for 245 feet. The crib for the pierhead had been built eight tiers high.

The breakwater was completed on September 22, and has a total length of 702 feet. It is constructed of round timber cribwork sheathed, except for the inner 70 feet of the approach, with 4-inch hardwood plank. The approach is 20 feet wide. The pierhead is 30·4 by 48·5 feet and is placed crosswise with the approach.

During 1906-7 a short pier or groyne was built outwards from the shore at a point 300 feet easterly of the first work, to give protection from easterly winds to boats lying at the latter and to retain the littoral drift.

As completed the pier is 124½ feet long and 12½ feet wide. The inner 38 feet is of earthwork with stone slopes, the remainder of cribwork similar to the breakwater, the outer 47 feet being sheathed with 4-inch hardwood plank. It was built as an extra by the contractors and completed on October 5.

The expenditure during the fiscal year 1906-7, was $5,529, of which $4,400 was for the original contract, $850 for the eastern pier and $249 for inspection.

FORT DUFFERIN.

Fort Dufferin, built by the Imperial government to command the western entrance of St. John harbour, stands on high ground, immediately above the end of Negro Point breakwater. In order to preserve from erosion by the waves the headland, crowned by the battery, this department began in 1882 at tide-level a retaining wall of sheathed cribwork, 430 feet in length, and in the following year constructed a further length of 303 feet. The work is exposed on the one hand to the force of the waves, and on the other hand to land slips.

In 1886-7 it was much disturbed by the sea and repairs were made in that and the following years, 205 feet of the original work being rebuilt. From 1887 to 1889 repairs were also made, and in 1890 the work was extended 100 feet.

General repairs were made in 1893-4. The work is from 7 to 14 feet wide on top and about 9 feet in mean height. The crest for the whole length is surmounted by a break 2½ feet high.

During the year 1896-7 a gap 81 feet long, in the break, was repaired, 200 lineal feet of longitudinals were renewed inside, and 128 cubic yards of ballast were restored to the work, while the sheathing was patched at intervals along the face with hardwood planking. In order to raise the beach and so protect the lower part of the face, toward the end of 1896, a groyne, 40 feet long, 10 feet wide and 4 feet in average height was built of hardwood piles, timber and stone. In 1897, the extension of the cribwork, a distance of 130 feet, was begun, and by the end of that fiscal year, had been brought within two tiers of the full height.

In 1897-8 the new extension was completed, ballasted and sheathed. Small repairs were also made to the sheathing of the old work.

In 1898-9 four groynes, in all 332 lineal feet, each built of hardwood piles, spaced 4 feet apart, driven from 9 to 12 feet into the bottom and planked with birch 9 inches square, securely strapped and bolted, were placed along the beach to protect the lower part of the sheathing of the breastwork; some ballast was also placed in the cribwork.

Repairs and improvements were made in 1900-1-2-3.

During the fiscal year 1903-4, a new block, 70 feet long and 20 feet wide, of close-faced cribwork, was built at the inner end of the breastwork. The cap of this block is flush with the break of the old work.

In 1904-5, one of the angles of the work was sheathed with 6-inch plank; the braces and upper timbers, for a distance of 160 feet, were painted with carbolinæum avenarius; 450 cubic yards of stone ballast were besides placed in the work.

In 1905-6, a length of 40 feet of the breastwork was sheathed, and a length of 70 feet, where undermined, was filled, ballasted and levelled off; the approach to the wharf was raised and the top, for a length of 130 feet, was coated with carbolinæum. Seventy cubic yards of ballast were besides placed in the work

In 1906-7, the sheathing was patched and 138 cubic yards of ballast were placed in the work.

The expenditure for 1906-7 was $499.27.

GREAT SALMON RIVER.

Great Salmon river, St. John county, is a small tidal inlet, eight miles east of Quaco. Shipments of lumber are made from this place to St. John.

A contract, for the construction of a breakwater for protection of the entrance to the harbour, was signed on July 27, 1905.

By June 30, 1906, the work was 136 feet long, 21 feet wide, and ten tiers high at the outer end.

In 1906-7, it was completed.

The expenditure to June 30, 1906, amounted to $2,175.

The expenditure during 1906-7 was $2,859.95.

HOPEWELL CAPE.

Hopewell Cape, in Albert county, near the mouth of the Petitcodiac and at the head of deep water navigation, is one of the several works intended for convenience of shipping in that large tidal river. Spring tides rise 45 feet.

For the use of vessels proceeding to Moncton, Hillsborough and Dorchester for cargoes, the department, in 1883, began the construction of a ballast wharf of round cribwork, 300 feet in length and 22 feet wide, which was completed in the following year. In 1885, the work was extended to the present length of 583 feet, by an addition built of square timber.

In 1901, the construction was begun by contract of a new wharf, intended to be 460 feet in total length, consisting of an approach of round cribwork, 210 feet long, together with square cribwork 250 feet long, which includes a pierhead, 50 by 35 feet on top and 48 feet high. By July 1, 1902, the cribwork and trestling of the approach

had been built and the pierhead had been brought up to the fifteenth tier, while the square cribwork had been extended to a total length of 210 feet.

During the fiscal year 1902-3, the work was brought up from the fifteenth to the forty-sixth tier or to the top and the wharf was completed. As spring tides rise 45 feet, a movable slip was, by request, placed on the pierhead, for convenience of the traffic at the varying stages of the tide. Brush and stone protection was also applied to the outside of the pierhead, the soft bottom of the Petitcodiac having scoured by action of the current. Some boulders scattered among the mud on the foreshore, where vessels lie at low water, were removed.

In 1906-7, two brush mattresses, from 4 to 4½ feet thick, well ballasted with stone, were laid to prevent scour at the new wharf, a result which was successfully accomplished.

The total expenditure to June 30, 1906, amounted to $25,466.25.

The expenditure for 1906-7 was $189.80.

LITTLE SALMON RIVER.

Little Salmon river, a tidal inlet in the Bay of Fundy, fourteen miles east of Quaco, in the county of St. John, is the site of a mill producing lumber to the value of about $25,000 annually.

The beach protecting this little haven being in danger of denudation, a protection work, 430 feet long (with a groyne 92 feet long), of piles and planking, was built along the crest of the beach in 1902-3. In 1904-5, two new groynes, each 90 feet long, were built, and the original one, near the channel, was repaired.

In 1906-7, a new groyne of piles and planking, 70 feet long, was built, and two streaks of planking were placed along the protection work.

The expenditure during 1906-7 was $247.81.

LORD'S COVE.

Lord's Cove, Charlotte county, a small fishing station on Deer island, is a port of call for steamers plying between St. Stephen, St. Andrews, Eastport and other points in Passamaquoddy bay. To afford facilities for this steamer, the construction of a wharf was begun in 1900-1. Spring tides rise 24 feet.

The wharf, without the approach, is intended to be a pile and trestle work, 328 feet long and 21 feet wide, with a pier-head, 33 feet in height.

During the fiscal year 1902-3, this wharf was extended to the back of the pierhead, a length of 120 feet by driving twelve bents and by completing the laying of the covering and the cap. A gallows-frame, ladder and flight of steps were also made, in order that the public might make immediate use of the wharf.

The work was then 289 feet long, exclusive of the stone approach, 28 feet in length.

In 1903-4, the pierhead (50 by 40 feet), was built, to which seventeen fenders and fifty-eight short braces remained to be applied. The work is now 328 feet long and 21 feet wide, with a pier-head, 35 feet in height. The wharf is approached by a stone embankment, 28 feet long and a rock cutting, 61 feet in length.

In 1904-5, the materials for a movable slip were ordered and in 1905-6 the slip was almost finished.

In 1906-7, the gearing was placed, the slip was completed and all the pile fenders, except three, were driven at the head of the pierhead. The sides are not yet fendered.

The expenditure to June 30, 1906, amounted to $4,634.54.

The expenditure during 1906-7 was $179.43.

MISCOU HARBOUR.

Miscou harbour lies between Miscou and Shippegan island, on the eastern side only a small passage, known as Miscou Gully, is left between the beaches extending

from the west, from Baie des Chaleurs, and has a depth in the channel of five to seven fathoms, at low water.

On April 27, 1904, the department entered into a contract for the construction of a wharf just inside the main entrance, on the Miscou side of the harbour. The contract price was $13,700.

The work was begun in May and completed on October 14, 1905.

Its total length is 876 feet, it consists of a shore block 99 feet long and 20 feet wide; eighteen blocks 20 by 20 feet; nineteen spans of 20 feet; and a pierhead 40 by 30 feet, being 30 feet in the general direction of the work; all the round timber open cribwork.

An amount was included in the estimates for 1906-7 for the payment of the balance, $2,540, due the contractors after the expenditure of the appropriation for 1905-6.

NEGRO POINT.

Negro Point, St. John county, is a headland about 60 feet above high water mark at the western entrance to St. John harbour, which is formed by the estuary of the River St. John on the northern side of the Bay of Fundy. Spring tides rise 25·33 feet; neaps, 15 to 20 feet.

In addition to convenience of position for distribution, by rail, of cargoes landed at the city of St. John, the harbour is remarkable principally for great tidal range, and for consequent freedom from ice during the winter months. The harbour is open, broadly speaking, from southeast to southwest, but southerly waves are broken by Partridge island, and southwest waves are mitigated by Negro Point breakwater, while the Foul Ground, a shoal tailing down from the peninsula on which the city is built, must have more or less effect in moderating the force of the easterly seas rolling round Mispec point.

By Partridge island, a rocky eminence devoted to quarantine and lighthouse purposes, the entrance of St. John harbour is divided into east and west channels. In the former or main channel, a minimum navigable depth of 19 feet is found on the bar at low water at ordinary spring tides. Two hundred yards inside the crest of the bar, a depth of five fathoms is obtained in the narrow fairway, while higher up and between the most southerly of the principal wharfs on either side of the harbour (450 yards wide at that point), twelve fathoms are given in mid-channel. The west channel, 10 to 14 feet deep at low water, and originally 1,200 yards wide, has been contracted to about as many feet in breadth by Negro Point breakwater which extends 2,200 feet S.E. by S. from the headland so styled.

The breakwater consisted, at first, of a cribwork core, 30 feet wide at the base, and 15 feet wide at the top (5 feet above high water ordinary spring tides), protected on both sides by large stones sloping to seaward at the rate of 2 to 1, and landward at the rate of 1 to 1. In the month of February, 1879, 1,300 lineal feet of cribwork were swept away to a depth varying between 13 and 19 feet from the top, the stones having been raked down by the wave action to a slope more nearly resembling the angle of repose of the material. In 1880, temporary repairs were made, and, in 1881, a contract, completed six years afterwards, was entered into, whereby the lost cribwork was replaced by heavy stones and the seaward slope made 3 to 1. Even this flatter inclination proved too steep for stability; consequently, notwithstanding their size, the stones, though smoothly laid, were soon displaced by the sea. A length of 50 feet of the breakwater, extending at full height beyond a masonry pier, built under the same contract to support a beacon, was also swept away. From 1891 to 1894 desultory repairs were made by the addition of large stones chiefly deposited about the end to prevent the lighthouse from being undermined.

In 1895 and 1897, heavy concrete blocks were laid.

In order to retain, for natural protection, along the seaward face of the work, the littoral drift formerly swept by the waves over the top into the harbour, a break of

piles, brush, stone and timber, 270 feet long, 8 feet wide and 4 feet high, begun in 1895, was completed in 1896-7, and was also extended 140 feet along the timber work in that year, with good effect. As a result of the construction of the break, the foreshore has advanced seaward, while the beach has increased in height and breadth.

During the year 1897-8, as a measure of precaution, 152 yards of granite were obtained and deposited about the lighthouse for protection during the winter, while stones previously removed by the sea were replaced in position.

The advance of the foreshore rendered necessary, in that year, the enlargement of the timber break, which was extended a distance of 80 feet along the breakwater.

A small groyne was also built for the purpose of obtaining some information as to the quantity of the littoral drift near the shore end. To preserve the timber the top of the piles and the knees of the break were given two coats of pitch.

One thousand and nineteen cubic yards of granite were supplied and laid in place in 1898-9, while 285 yards of the original stone of the work, displaced by the sea, were restored to position.

During 1899-1900, 414 cubic yards of granite were delivered and placed round the lighthouse. Six hundred and six cubic yards of dislodged stone were put back. Five concrete blocks, containing 52·1 cubic yards, were also laid in place.

In 1900-1, five blocks of concrete, aggregating 54½ cubic yards, were built in situ; 1,313 cubic yards of new granite were received and placed, while 1,893 cubic yards of the original stone of the breakwater, removed by the sea (which on November 8, 1900, made two clear breaches through the work) were restored to position. The timber break was also extended two tiers for a distance of 40 feet.

During the year 1901-2, 4,694 cubic yards of large stone principally granite, together with 719 cubic yards of small stone, were delivered and placed in position.

During the fiscal year 1902-3, 4,603 cubic yards of large, and 600 cubic yards of small stone were delivered and placed at Negro Point breakwater.

Until the work has either been extended to Partridge island or has received a permanent superstructure, constant repairs will be required.

In 1903-4, twelve blocks of concrete, aggregating 417 cubic yards, were made in place.

During the year 1904-5, 1,123 cubic yards of granite were delivered, a stone-breaker was hired, and the whole was crushed to the size required for concrete. Thirteen large blocks of concrete, aggregating 599 cubic yards, were made in place.

In 1905-6, 1,041 cubic yards of granite were delivered, a stone crusher and engine were purchased and the whole of the stone crushed to the size required for concrete. Twenty-four blocks of concrete, equal to 788·6 cubic yards, were made in place; bags of concrete were placed beneath blocks which were undermined, other blocks were backed up with the original stone of the breakwater, scows were caulked and repaired and the whole of the plant maintained and kept in order.

In 1906-7, 1,002 cubic yards of granite, of random size, were delivered and crushed to the proper dimension for making concrete, and fourteen large blocks of concrete, aggregating 560·3 cubic yards, were made in place. Thirteen hundred barrels of cement and a new concrete mixer were purchased; a new scow, to carry materials for concrete, from the shore to the breakwater, was built and the whole of the plant was overhauled and repaired.

The expenditure to June 30, 1906, amounted to $567,401.36.

The expenditure during 1906-7 was $19,357.25.

NORTH HEAD.

At Flag Cove, near North Head, in Grand Manan, an island forming part of the county of Charlotte, and lying twenty-four miles south of St. Andrews, but double that distance from St. John, a wharf, known as Dixon's was purchased by the department.

Contract plans and specifications have been prepared for the extension of it as a public wharf.

In 1906-7, some ballasting was done to secure this wharf for the winter, the expenditure being $44.50, not including the purchase money.

Total expenditure during 1906-7, $2,249.17.

NORTHWEST MIRAMICHI.

The Northwest Miramichi, an important lumbering river, unites with the southwest Miramichi to form the Miramichi river proper, about one mile above Newcastle, or twenty-one miles above the mouth in Miramichi bay. At the junction of the two branches, the river is about three-eighths of a mile wide.

The Northeast Miramichi is generally navigable for light draught tugs and river steamers to Redbank, twelve miles above the junction, and for sea-going vessels to 'Sinclair's,' at the Northwest Miramichi bridge, three miles above Newcastle.

About one and a half miles above Newcastle, a bar occurs over which is a depth of only 13½ feet at low water and 19½ feet at high water of spring tides, and on which lumber steamers loaded at Sinclair's often ground.

Work by the *Peter England* dredge began here on June 25, 1906-7, by the 30th, 518 cubic yards of material had been removed.

The dredging was continued during the past fiscal year, when about 5,232 cubic yards of sand was removed. A number of sunken trees and logs were also taken out of the channel which probably, by the accumulation of sand about them, cause the lumps which were most complained of. Work was discontinued on September 22. A considerable improvement has been made in the channel.

The expenditure for the fiscal year 1906-7 was $2,239.62.

OAK POINT.

Oak Point is situated on the north side of the Miramichi river, eleven miles below Chatham.

To provide a landing place for the river steamer and shipping facilities for the district, a contract was entered into on October 23, 1906, with Mr. T. P. Charleson for the construction of a wharf at Oak Point.

The proposed work is to be 470 feet long with 8 feet at low water at the pier-head, and will consist of 10 blocks 20 feet square, eleven spans of 20 feet, and a pier-head 30 by 50 feet.

The contract price is $7,200.

Construction work has not begun.

Expenditure during fiscal year of 1906-7, $209.96.

PARTRIDGE ISLAND, ST. JOHN.

In order to furnish Partridge island, the lighthouse and quarantine station, at the entrance of the harbour, with a water supply, an agreement was made with the corporation of St. John whereby it extended the pipe line, in 1904, from St. John street to H. W. mark, below Fort Dufferin. The work was completed in November of that year. The department paid $4,067.74, being three-quarters of the cost, the corporation doing the work of construction and continuing to maintain that part of the pipe line.

On Partridge island the department, in that year, excavated 2,032 lineal feet of standard trench, almost entirely in rock. Three thousand six hundred lineal feet of 6-inch extra heavy galvanized wrought iron pipe were purchased, together with 202 flexible ball joints. Two thousand three hundred lineal feet of cast-iron pipe were also delivered, together with six valves and the same number of tees and hydrants.

In 1905-6 nine hundred and forty-six lineal feet of cast-iron pipe were laid, together with 3,253 lineal feet of wrought iron pipe with flexible joints, which were laid under water across the west channel of the harbour of St. John. Water was turned on in February.

In 1906-7, 1,719 lineal feet of trench were excavated, principally in the rock to the full depth; 2,332 lineal feet of 6-inch pipe were laid, together with 936 lineal feet of service pipe. Three thousand three hundred and thirty-two lineal feet of trench were back-filled; eleven hydrants, nine gates and one blow-off valve was placed. At the disinfecting house the pipe was boxed with concrete 2½ feet square for 30 feet in length. Two concrete retaining walls, both 3½ feet thick, one 18 feet long and 12 feet high, the other 12 feet long and 8 feet high, were built, and all the gates and the blow-off valve were boxed. The pipes were carried and connections were made with all the buildings, the medical officer's house and the fog whistle.

During severe frost, on February 24, the submerged pipe, which lies on the bottom of the west channel, was found to be frozen. The temperature of the sea water, taken at the time, was 31 degrees Fahrenheit.

The total expenditure to June 30, 1906, amounted to $42.323.93.

The expenditure during 1906-7 was $12,999.42.

PETIT ROCHER.

Petit Rocher is a farming, fishing and lumbering settlement on the southwestern side of Baie des Chaleurs, twelve miles north of Bathurst.

To afford protection to the fishing boats and vessels trading in Baie des Chaleurs, for which there is no natural shelter in the vicinity, and to facilitate the shipment of lumber, a contract was entered into May 31, 1904, with Simon McGregor, for the construction of a breakwater, consisting of a main work, 209 feet long on the outer face, and a wing or 'L,' placed at an angle of 74 degrees 30 minutes with the main part, 160 feet long on the outer face. The width on top will be 30 feet. At its inner end the breakwater will be 480 feet from the shore. The depth along the inner face varies from 11 to 18½ feet at low water.

In 1904-5, a right of way, 860 feet long, from the public road to the shore was opened up, graded and fenced.

The contract work was begun on March 18, 1905, and by the end of 1904-5 two cribs, 96½ and 41 feet long respectively, had been built and sunk in place.

A crib to form the remainder of the work was started on February 19, 1906, but on March 11, when it had reached a height of about six tiers, it was carried away by the ice. It was, however, recovered on May 14. The outer section, which was intended to complete the main part of the breakwater was found to be intact and work on it was resumed. By the end of the fiscal year this crib had been built to a height of nineteen tiers and the two cribs sunk in 1905 had been filled with ballast and built up to half tide level, and the upper ballast floors were laid.

During the fiscal year 1906-7, the crib forming the remainder of the main work was sunk in place and a crib to complete the 'L' was begun and placed in position. The building of the superstructure was continued on the main part up to about high water level, when two storms, on November 12 and 16 carried away nearly the whole top, the break being about 9 feet in extreme depth.

Work was resumed on March 7, and by the close of the fiscal year the remains of three damaged tiers of face timbers had been removed, and a part of the wrecked superstructure near the southern end rebuilt, the interior being filled with ballast.

The expenditure for the fiscal year 1906-7 was $5,029.60.

POINT DU CHÊNE.

Point du Chêne lies on the western side of Northumberland straits and on the south side of Shediac harbour. It is the terminus of a branch line of the Intercolonial

railway and for the steamer *Empress* running during the season of navigation from Summerside, P.E.I.

The works at Point du Chêne consist of two breakwaters, an inner and an outer each 600 feet long, with an opening between of 80 feet, and a ballast wharf 200 feet long connecting the outer breakwater with the Intercolonial railway wharf. They have been repaired or rebuilt at various times.

A storm on November 14, 1904, carried away the covering, stringers and sheathing for a length of 150 feet near the outer end of the outer breakwater. The greater part of the remaining timbers of this section were removed down to near low water level before June 30, 1905, during the fiscal year 1905-6, rebuilding with a close vertical face was in progress. The new work started at low tide level with a length of about 130 feet and was completed, except for the covering and cap for a length of 100 feet at the top. Some 3,298 cubic yards of mixed stone were deposited to form a stone slope outside the outer breakwater and 64,300 F.B.M. creosoted timber was procured.

During the fiscal year 1906-7, the remaining section of the break, about 40 feet long, was built up with a vertical face, and the covering and cap were laid and the whole portion rebuilt, about 150 feet long, which was first filled with field stone.

A block, with close-faces of creosoted timber, was built at the outer end of the outer breakwater to retain the stone slope. It was about 15 feet high, and was being sunk in place when heavy storm in November forced it about 30 feet out of position and into the channel. After a number of attempts it was replaced, on Sunday, December 30, by the Intercolonial railway wrecking crane, a diver being employed to make fast to the lower timber the chain, &c., used in moving it.

Construction was then resumed and by March 31, the placing of hardwood fenders and iron straps at the outer corners only remained to complete the block.

During 1906-7, 1,376 cubic yards of large and mixed stone were placed along the outer face of the outer breakwater, and the rough slope was levelled off preparatory to covering it with a laid slope of large blocks.

The expenditure for the fiscal year was $8,420.78.

RICHIBUCTO.

Richibucto harbour lies on the eastern side of Northumberland straits, about twenty-six miles north of Shediac. It is one of the New Brunswick deal ports, and the terminus of the Kent Northern Railway.

The works originally proposed were two breakwaters extending from the points of the sandy beaches at the entrance to the harbour to confine the current to one permanent channel and cut through the bar by scour.

In 1873 and 1874, works were commenced by the construction of a breakwater or pier, 1,200 feet long off the north beach. This was subsequently extended westward at different times to stop erosion of the beach, till 1891 when a total length of 2,158 feet had been built.

Between 1891 and 1903, in consequence of damage and decay, repairs and reconstruction were carried on at different sections of the work, and a number of groynes and breastworks were built from both the outside and inside of the main work to protect the latter and raise the beach.

In 1903-4, an extension 315 feet long was completed by contract. It starts at a point on the breakwater 300 feet from the original outer end and runs diagonally across the channel.

On November 16, 1905, a contract for a further extension of 300 feet in the same direction was entered into; the contract price is $17,000.

The extension consists of brush mattresses, weighted with small stone, through which three rows of piles, 5 feet apart, are driven, and on which a rubble mound is laid 12 feet wide on top, finished with large stone sloping at the rate of 2 to 1 on the sides.

Work began on May 1, 1906, and by June 30, 1906, 238 fascines from 40 to 72 feet long and one mattress had been constructed and a second mattress begun.

At the close of the fiscal year 1906-7, the lower mattresses had been placed for the full length of the work, and extra mattresses, on account of scour of the bottom by the current, to make up the required height, also two of the upper mattresses, and all were weighted with small stone. The piles were driven for a length of 171 feet from the beginning of the work, and the core stone was laid for about the same distance. The placing of slope stone was begun at the inner end.

The expenditure for the fiscal year 1906-7 was $3,683.

RIVER ST. JOHN AND TRIBUTARIES.

The River St. John, proper, 450 miles long, takes its rise from the sources in the province of Quebec and the state of Maine, at reputed maximum altitude of 2,159 feet above sea level. Entering New Brunswick at the confluence of the St. Francis, a little below the borders of Quebec, it continues to be the international boundary almost to Grand Falls, and after flowing through the province for nearly 300 miles (by way of the counties of Madawaska, Victoria, Carleton, York, Sunbury, King's and Queen's) discharges into the Bay of Fundy at St. John. Many tributaries, some being of considerable magnitude, are received by the main stream. Among them are the St. Francis, Madawaska, Green river, Grand river, Salmon river, Aroostook, Tobique, Presq'Ile, Meduxnakeag, Nackawick, Eel river, Keswick, Nashwaak, Oromocto, Jemseg (Grand lake), Washademoak, Belleisle, Kenebecasis. Except the last five, which are slightly tidal for some distance, they are fresh water streams.

The total basin, from source to mouth, is computed to be 26,000 square miles, an area almost equal to the whole of New Brunswick, but as a part of the watershed lies outside, only a little more than one-half the province is drained by the river. The St. John is considered navigable for vessels 15 feet in draught for a distance of more than fifty miles from the mouth, but no positive information on this point has yet been obtained. About 8 feet at low water can be carried to Fredericton, eighty-four miles from the sea, and six miles below the head of tide at Springhill. Three natural features of the river are remarkable, viz.: The tidal falls, Grand falls and the annual floods.

Although in summer the fresh water stream between Woodstock and Fredericton is in places 400 to 1,000 feet wide, expanding at the latter place, after reaching tide-level, to half a mile in breadth, yet the actual mouth of the river (a rocky gorge 400 yards long, immediately at the head of St. John harbour), measures but as many feet across at high water. Here at low water, the level of the river is from 11 to 15 feet above the sea, and as the ordinary tides flow fram 23 to 27 feet, the sea level at high water is from 8 to 13 feet higher than the waters of the river. Thus there are two falls at every tide, viz., one outward and one inward, and vessels can only pass when the waters of the ocean and the river are on a level. This occurs only for a space of about ten minutes during each ebb and flow of the tide; at all other times it is either impassable or extremely dangerous. (Admiralty sailing directions.)

At Grand Falls 223 miles from the sea, the whole volume of the river plunges over an almost perpendicular face of limestone, 60 feet high into a deep ravine 200 feet across, somewhat similar to the narrow pass at St. John. Flanked for nearly a mile by lofty rugged cliffs, the confined current dashes from the foot of the falls with excessive strength, mining deep pot-holes in the rocky bottom of the channel in the course of a further descent, estimated to be slightly less than the first. In the harbour of St. John, ordinary spring tides are considered to rise 25½ feet. At the wharfs of the river steamers, a mile above the falls, while summer range is about 3 feet, the highest flood mark is given as 17 feet above extreme low water. At Oromocto, seventy-three miles from the sea (where the tidal range is from 10 to 12 inches) the flood of 1887 reached a bridge 20 feet above low water. At Andover, 200 miles from the sea, floods attain an elevation of more than 27 feet above summer level. By contrast, the Tobique and St. Francis swell 9 and 6 feet respectively. After the first spate, due to the melting of the snow in the catchment basins of the Kennebecasis, Belleisle bay and Washade-

moak, a secondary flood occurs, caused by the back water of the main river, which is fed from sources further north, and consequently later in thawing.

The harbour of St. John is open all the year round, but the river is ice-bound from November to April, an average period of 144 days. The water usually begins to rise in April, reaching flood pitch early in May, and maintaining a high level for two or three weeks. By the middle or end of July, the water has fallen to summer level, a stage lasting with some variations dependent upon the rainfall, for about sixty or seventy days.

In addition to a little coal, a considerable quantity of cordwood and the ordinary food supplies yielded by the farms of a lengthy fertile valley, the trade of the river comprehends an abundance of valuable timber, fluctuating each season in amount, but generally at least equal to 135,000,000 superficial feet annually. Most of the logs are floated loose down the tributaries and upper river to Fredericton, some being manufactured there and shipped coastwise or to the United States. The remainder, or major part, is towed from the provincial capital to St. John in rafts, giving employment to a fleet of tugs.

For the purpose of works, three divisions may be made of the river:—

1. Tidal navigation, for steamers and sailing vessels between St. John and Fredericton, eighty-four miles, requiring 11 feet at low water.

2. Inland navigation, from Fredericton to Woodstock, a distance of about sixty miles, requiring three and a half feet of low water.

3. The Upper river, including, with the tributaries, all that part above Woodstock. This division is now used for the passage of timber only. On some of the tributaries beyond the reach of the railways, supplies for the lumber camps are transported in towboats, for which channels are required to be made and tow-paths provided.

River St. John Tidal Navigation.—The tidal section of the River St. John comprehends, besides the main stream, navigable by steamers which run daily between St. John and Fredericton, a distance of eighty-four miles, four tidal arms, all navigable by wood boats and regular passenger steamers, the extent of the whole tidal navigation being as follows:—

Main River St. John	84 miles long.
Kennebecasis	24 "
Belleisle Bay	12 "
Washademoak Lake	27 "
Grand Lake and Salmon River	35 "
Total extent	182 miles.

For the convenience of steamers and other craft navigating the main river and its branches, the provincial government has erected a number of wharfs, towards which the department has made contributions amounting to one-half the certified cost.

During the year 1901-2, assistance was given to a number of these wharfs, $3,000 being available for that purpose, while in the fiscal year 1902-3, $4,813.14 was applied to the same object.

In 1905-6, contributions aggregating $3,293.82 were made by the department to six of these wharfs.

LOWER LINCOLN.

(Sunbury).—In 1905-6, the wharf at Lower Lincoln was repaired. The body of the wharf, 55 feet long and 40 feet wide, received some ballast, new stringers and new covering. The sloping-face, 95 feet long, was given new sheathing throughout. The approach, 55 feet long and 20 feet wide, was made up with earth, brush and gravel. Two new mooring-posts, four ring-bolts were placed in position. A new cap-timber, 55 feet long, was placed on the river face. The expenditure amounted to $274.74.

In 1906-7, the top was temporarily secured to prevent it from being carried away during the freshets, at a cost of $14.50.

RIVER ST. JOHN UPPER.

The Upper river, comprehending many branches, including the Tobique, Green River, St. Francis, &c., &c., extends from Woodstock to the northwestern boundary of the province. Navigation on the upper river is confined to the passage of timber and rafts, or the tow-boats which convey supplies up the streams, from the end of the railways to the lumber camps, situated beyond the lines of ordinary communication.

TOBIQUE.

McAskill's (Victoria).—A cribwork dam, 395 feet long, 8 feet wide and 6 feet high, of elm and ash logs, was built and ballasted.

The expenditure during the year amounted to $424.25.

William Miller's (Victoria).—At this place a cribwork wharf, 356 feet long, 18 feet wide and 7 feet high, was built and ballasted by an expenditure of $468.45.

Right Hand Branch (Victoria).—Between a point two miles below Trousers lake and the mouth of Trousers lake branch, a distance of ten miles, 265 boulders, equal to 500 cubic yards, were blasted; about 1,000 cubic yards of loose rock were hauled ashore and a tow-path, 6 feet wide, was cut on one side of the stream for a distance of ten miles.

The expenditure during the year amounted to $500.

SISSON BRANCH FALLS.

(Victoria).—The apron of a dam, at the first pitch below the falls, was repaired by the insertion of four spruce stringers, 40 feet long, and eight cross-ties; the apron of the dam at the second pitch below the falls was repaired in a similar manner, and both were covered with 140 spruce poles. A pier, at the front of the falls, was also repaired and ballasted.

The expenditure for the year amounted to $200.

MAIN RIVER.

Aroostook to River de Chute (Victoria):—On the main river St. John, at the mouth of the Tobique, three rocks, aggregating 53 cubic yards, were blasted.

The expenditure for the year amounted to $99.

Grand Falls to Aroostook (Victoria):—Between these points, on the main River St. John, the following blasting was done:—

At Rapide de Femme, 2 rocks	18 cubic yards
At White's Rapid, 3 rocks	23 "
Total	41 cubic yards

This expenditure for the year amounted to $100.

GRAND FALLS (VICTORIA).

At Grenier's Eddy, at Grand Falls on the main River St. John, cribwork, 54 feet long, 12 feet high, 14 feet wide at the top and 28 feet wide at the bottom, sheathed on one side with 3-inch birch plank, was built and ballasted with stone blasted from the Narrows. Leading to Grenier's Eddy, a tow-path, 330 feet long and 16 feet wide, was cleared and built, the lower side being filled with logs and earth, and the stumps being removed.

The expenditure during the year amounted to $600.

LITTLE RIVER FALLS (VICTORIA).

At this place, which is near Grand Falls, a cribwork pier, 60 feet long, 8 feet wide and 5 feet high, was built. Twenty-seven rocks aggregating 42 cubic yards, were besides blasted.

The expenditure during the year amounted to $150.

GREEN RIVER (MADAWASKA).

A tow-path, 5 feet wide, was made from a point four miles above the mouth of Little Forks, Green river, for a distance of seven miles upstream; for the same distance the bed of the stream was cleared of stumps and trees, which were hauled to the bank. A pier, 30 feet long, 10 feet wide, and 5 feet high, was built of spruce logs, and an old dam (eleven miles from the mouth), 160 feet long and 8 feet high, was repaired with logs and poles, which were faced with earth.

The expenditure for the year amounted to $300.

IROQUOIS RIVER (MADAWASKA).

At Corriveau's rapids, one mile from the mouth of the Iroquois, 124 rocks, equal to 69 cubic yards, were blasted and hauled from the bed of the stream to the banks.

The expenditure during the year amounted to $100.

EDMUNSTON (MADAWASKA).

The top of the cribwork protection, 465 feet long and 8 feet wide, was raised 1½ feet.

The expenditure during the year amounted to $300.

ST. FRANCIS RIVER (MADAWASKA).

At Cross Lake rapids, a channel, 200 yards long, 25 feet wide and from 3 to 4 feet deep, was excavated, and at the same place, forty-two boulders, equal to 67 cubic yards, were blasted in the channel and hauled to the bank. At Horse Back rapids, a channel, 110 feet long, 25 feet wide, 4 feet deep, was made. Through Gendreau bar, a channel, 60 feet long, 25 feet wide, 4 feet deep, was made, while through Jones' bar, a channel of similar width and depth, but 70 feet in length, was scraped. At the same place, three boulders, equal to 8 cubic yards of rock, were blasted.

The expenditure during the year amounted to $300.

The whole expenditure on the Upper river amounted to $3,717.45 for works, and for pay and expenses of the foreman, $588.08, during the year 1906-7.

Exclusive of the cost of dredging, the total expenditure on the River St. John, to June 30, 1906, amounted to $188,529.82, and inclusive of dredging, to $488,839.78.

The whole expenditure on the River St. John and tributaries, during 1906-7, amounted to $5,653.35, for works, and, to $8,724.05, for dredging.

SAND POINT (ST. JOHN HARBOUR).

On September 30, 1905, a contract was let for excavation of a portion of Sand Point Slip, to a depth of 30 feet below low water, in order that the corporation might provide a new berth for the winter port traffic. Work was begun on October 9, 1905.

On account of the presence of large boulders in the clay, difficulties were experienced by the contractor, and many breakdowns occurred in attempting to lift them, owing to the tenacity of the material in which they were embedded, and also on account of their great weight.

By June 30, 1906, 200,095 cubic yards of material had been excavated.

During 1906-7, 96,756 cubic yards were excavated.

On September 21, 1906, another contract, for additional work, was let in consequence of the request of the corporation of St. John.

Under the second contract 72,523 cubic yards of ordinary spoil and boulders were excavated during the fiscal year 1906-7.

The expenditure during the year 1906-7 was $46,115.49.

SHIPPIGAN GULLY.

Shippigan Gully, a passage between Shippigan island and the mainland, much used by fishing and other vessels in passing from Baie des Chaleurs to the Gulf of St. Lawrence, is situated fifty-six miles east of Bathurst, the shiretown of the county, and three miles from Shippigan, the terminus of the Caraquet Railway.

Works were commenced in 1875, for the purpose of improving the channel at the gully:—First (1875-9) by constructing a breakwater on the east side, and a dam to close what was known as the east gully; repairs and extensions of the dam and breakwater were in progress during 1880-4, 1886-7, 1888-92, and 1893-4. Secondly, in 1890-2, by building a breakwater off the west beach—this was repaired in 1892-4. Thirdly, between 1897 and 1905, by constructing beach protection works on both sides of the harbour, closing all runnels which might enlarge or cause dangerous gaps in the beach, and building groynes to promote accumulation of sand and gravel for the protection of the work. During this period also general repairs were carried on and a new pile pierhead, 44 by 34 feet, was built as an extension to the eastern breakwater.

At the commencement of the works, the depth at the entrance was only 3½ feet at low water. In 1898 it had increased to nearly 6½ feet, and by a survey made in 1903-4, it was shown that the concentration of the current in one channel by the construction of the breakwaters and other works had increased the depth to about 8 feet at low water or 13·8 feet at high water of spring tides.

In 1904-5, a pile block, 77 feet long on the centre line, and 24 feet 4 inches in extreme width, was built on the inside of the west breakwater, 86 feet from the outer end. This will protect the breakwater from the ice of Shippigan harbour which strikes here with great force when carried by the ebb tide and strong winds, and will tend to deflect the current and straighten the channel which now makes a sharp double bend just inside the entrance.

The block was completed during the fiscal year 1906-7, by the addition of part of the covering, two ladders, and about 35 cubic yards of ballast.

Repairs to the inner face of the western breakwater were begun in 1905-6, between the new block and the outer end. These were completed during 1906-7 by driving and securing 66 hardwood close piles.

During 1906-7, on the outer face, for a length of 191 feet near the outer end, the old decayed close piles were removed and new close piling driven, 213 piles being required. An additional 10 by 12 waling was placed inside the piles and the old waling, where decayed, was renewed. A large quantity of brush and about 430 cubic yards of stone were placed inside the work, filling it to within 3 feet of the covering. In relaying the covering about 4,000 F.M.B. of new 4-inch plank used. Two groynes were cut down to prevent their being lifted by the ice, and additional brush was placed in the low points of the breastwork on the west beach.

The expenditure for the fiscal year 1906-7 was $2,999.96.

SHIPPIGAN HARBOUR.

Shippigan is a village and settlement of about 1,000 inhabitants, situated on the mainland just opposite Shippigan island. It is distant by rail sixty-five miles from Bathurst, twenty from Caraquet, twenty-four from Tracadie, and is three miles from Shippigan Gully.

Between the village and Shippigan island is a fine harbour about seven miles long, north and south, and from two-thirds of a mile to five miles wide, opening into the Baie des Chaleurs on the north through Shippigan channel, about two miles wide, and

into the Gulf of St. Lawrence on the south through Shippigan gully, 720 feet wide between breakwaters.

On December 29, 1905, the department entered into a contract for the construction of a wharf at the terminus of the Caraquet Railway, which is central as regards population, near deep water, and a convenient point for passage to Shippigan and Miscou islands.

The wharf is 900 feet long, and consists of a shore block 245 by 25 feet, 13 blocks 25 feet square, 14 spans of 20 feet, and a pierhead 50 feet by 30 feet.

The contract price was $15,940.

Construction was begun on May 4, 1906, and by June 30 the outer 48 feet on the shore block had been built about 4 feet high. The cribs of blocks 3 to 12 inclusive, had been sunk in place and built to an average height of about 6 feet, and the cribs of the pierhead and block 13 were begun.

The wharf was completed on November 30, 1906, and on December 10 an agreement was made with Mr. Charleson for the construction of a 25-ft. extension to the pier head, for close piling the outer face and corners, sheathing part of the end face, and placing iron straps around and screw bolts through the end corners of the pierhead. The cost of the extra work is $2,000.

The extension was begun on December 18, and by March 31, 1907, it had been built to a height of 16 feet 9 inches, at the outer corner.

The expenditure for the fiscal year 1906-7 was $14,617.50.

STONEHAVEN.

Stonehaven, formerly Clifton, is situated on the south side of Baie des Chaleurs, eighteen miles east of Bathurst. The breakwater at this place, originally 425 feet long and built by private persons, was acquired by the department in 1878. During this same year it was extended 325 feet. The outer 220 feet is placed at an angle of 72 with the shore portion.

The harbour affords shelter for fishing vessels and for schooners engaged in the export of grindstones, &c., the depth at low water being 7 to 8 feet. Spring tides rise 7 feet.

Between 1886-88, and 1891-93 and annually since 1897, general repairs have been made to the work, and large stones of from one-half to one cubic yard in bulk, have been placed along the northern and eastern faces. To prevent these being swept around the end of the work a close-face cribwork block, 70 by 40 feet, was built in the year 1901-3, at the westerly end of the 'L.'

In 1905-6, a new pier was begun to protect the harbour from westerly storms. It starts at the shore, 225 feet westerly of the present work, and runs towards the end block of the old breakwater. An entrance 120 feet wide is left between the two works.

The new pier consists of an approach, 254 feet long and 15 feet wide on top, of round timber cribwork, sheathed on the inside with 3-inch hardwood plank, and a pierhead with faces of square timber 50 by 30 feet.

The timber work was completed during 1905-6, and a stone slope faced with close laid granite blocks, which is to protect the outer side of the approach was constructed for a length of 90 feet.

During the fiscal year 1906-7, the stone slope of the new pier was completed; about 195 cubic yards of small and 75 of large stone were placed outside the pierhead, and 16 fenders around the end block of the old work.

Six hundred and fifty-six cubic yards of small stone and 334½ of large, were bought during the year.

The expenditure was $1,999.99.

TYNEMOUTH CREEK.

Tynemouth Creek, St. John county, twenty-one miles east of the city of St. John, is one of the several small havens, dry at low water, found on both shores of the Bay of Fundy, which are only useful on account of the high range of tide. Tides rise here about 28 feet. Inside a beach of gravel and stones, is a tidal basin, accessible to small vessels at high water by an opening at the east end of the beach.

In 1874-5, the department built a substantial cribwork pier on the rocky foreshore of the eastern cliff to prevent vessels from taking ground on that side.

In 1882-3, another work, to maintain the channel, was built on the point of the beach on the opposite side.

In 1894-5, a sum of $225 was applied to replacing some of the fenders and covering of the east pier and to removing part of the rocky ledge obstructing the channel.

In 1897-8, a sum of $510 was expended in removing 813 cubic yards of shingle from a shoal obstructing the entrance, and in effecting minor repairs to the west pier.

The harbour is constituted by a long beach stretching from the western side of the inlet. By heavy gales, the crest of the beach was cut down almost 5 feet for a length of 300 feet.

In 1900-1, to prevent this beach from being lowered and the harbour from being endangered, a protection work of piles and planks, from which three groynes, 41 feet long, projected, was built for a length of 345 feet. At the cribwork groyne, of the west pier, a block, 68 feet long, over all and 16 feet wide, repairs were made for a length of 52 feet; new ballast floors were inserted; new ballast was placed in the work, and the top was given new stringers, and in great part, new covering, besides 10 new fenders. The remainder of the covering of the west pier was also patched in places.

At the east pier, chocks were inserted between started face-timbers, to retain the ballast; thirteen new fenders were placed and the break was repaired.

During the fiscal year 1903-4, repairs were effected.

In 1904-5, general repairs were made principally to the west pier, a part of which was raised 5 feet, ballasted, fendered and covered. At low water, the channel which curved sharply was strengthened, and the shingle banks were protected with brush and stone. Large stones were removed from the beach and the channel was much improved.

The expenditure during 1906-7 was $7.55.

WILSON'S BEACH.

At Wilson's Beach, a fishing settlement in a slight indentation of the coast on the west side of Campobello, an island in the Bay of Fundy, forming a part of the county of Charlotte, a breakwater, 373 feet in length, was built, to shelter the cove, by the joint contributions of the federal and provincial governments between the years 1874 and 1878. The outer arm of the breakwater having become dilapidated, and the cove having been silted up, preparations were made in 1899-1900 to restore the inner end, 284 feet in length, and the repairs were nearly completed in the following year, 1900-1. A quantity of materials was also procured for the construction, in deep water, of the dismantled outer end.

In 1901-2, the repairs to the inner end were completed.

In the fiscal year 1902-3, crib No. 1 was increased 130 feet in length on the outside and raised at the inner end to the 26th, and at the outer end to the 23rd tier. Crib No. 2 was brought up to the 23rd tier.

In 1903-4, the superstructure of crib No. 1 was completed, while the top of crib No. 2 was brought up to the full height, with the exception of the benching required to be left for making connection with Crib No. 3, which was begun and brought up to the tenth tier in height.

By the end of 1904-5, crib No. 3 had been built, sunk in place, brought up to the height of the third floor and ballasted, and the work had been covered to within 85 feet of the end,

During 1906-7, the tops of the fenders of Crib No. 1, ranging from 12 to 20 feet in length, were placed; crib No. 3 was built up eleven tiers in height, without including the cap, was ballasted and covered; the fenders were completed on Crib No. 2. Three mooring-posts were placed in Crib No. 3, and a movable slip with hoisting gear was built. The upper works were painted with carbolinæum. With the exception of the spiking, the work is completed.

The expenditure to June 30, 1906, amounted to $40,534.09.

The expenditure during 1906-7 was $1,524.37.

PROVINCE OF QUEBEC.

AMHERST.

Magdalen Islands.

The pier had to be raised from ½ to 1½ feet for a length of 200 feet. The northwestern outside corner, damaged by steamer, had to be repaired, stone ballast placed outside the mooring posts, guards and fenders painted. The schooner wrecked in channel was removed.

Expenditure during the last fiscal year, $1,050.19.

ANSE À BENJAMIN.

L'Anse à Benjamin, at St. Alphonse, is situated on the west side of Ha! Ha! Bay, River Saugenay, in the county of Chicoutimi.

The work done during the fiscal year 1906-7 was the continuation of the blasting and the removal of boulders.

Expenditure, $977.08.

ANSE À LA CAVE.

Anse à la Cave, or Bon Désir, in the municipality of Les Bergeronnes, is situated on the north shore of the St. Lawrence, five miles east of Les Bergeronnes village.

The Bay of Anse à la Cave or Bon Désir is much frequented by schooners loading cordwood and timber. The entrance to the bay being obstructed by boulders, some of them were removed.

Expenditure in 1903-4, $191.

During the fiscal year 1906-7, few boulders were blasted and removed. Expenditure, $200.88.

ANSE À L'ISLOT.

Anse à l'Islot is a small harbour, seven miles east of Newport, protected from the northerly and easterly winds by the main coast, and from the southwest gales by a small island, being thus open only to southerly gales.

It was decided to build a landing pier, running from the main shore towards the outside end of the island, in a southwesterly direction, answering both as a landing pier and as a breakwater against southerly gales.

During the fiscal year 1905-6, timber was bought for the proposed work to the amount of $996.55.

During the last fiscal year two cribs, 90 feet long each, were built. The first had shortly been placed into position, when a very severe southerly storm turned it out of

position and brought the second ashore where it was demolished. The first crib had to be entirely unloaded and brought ashore. During the months of February and March a crib, 90 feet long, was built and placed into position, in 16 feet of water, at low tide, and built up to coping.

Expenditure during 1906-7, $2,999.57.

ANSE AU GRIFFOND.

Anse au Griffond is seventeen miles northwest of Gaspé cape. The mouth of the river, having choked and closed up by a gravel bar thrown in by northeasterly gales, overflowed the flats and part of the village, causing a good deal of damage to properties and to the fishing industry. The new channel running easterly inside of the gravel bar had to be closed by a training pier, 345 feet long by an average of 11 feet high and 22 feet wide, with brush and stone backing.

The gravel bar, 10 to 12 feet high and 170 feet wide, had to be cut through to continue the training pier and to open a new channel. A channel of 600 feet, giving 440 cubic yards of earth, had to be made at some distance above the work, so as to take the water from a small tributary into the main river, above the works under construction. 390 feet of the west or left hand side training pier has been built and secured.

Expenditure during the last fiscal year, $1,341.74.

ANSE ST. JEAN.

Anse St. Jean is situated on the north shore of the Saguenay river, twenty-five miles above its mouth.

The public landing pier at this place was commenced by the local government in 1876, and continued by federal government in the years 1879-80-81.

In 1880-1, the upper part of the pier was completed, at the expenditure of $1,091.72.

During the years 1884-5, the pier was repaired. Expenditure, $94.45.

During the year 1886-7, the sum of $865.28 was expended on the construction of a movable slip, building an open shed, 40 by 28 feet, and renewing part of the flooring.

In 1890-1, the portion of the wharf which settled in the spring of 1889, was raised from 2½ to 3 feet, over a length of 135 feet, and the flooring was renewed; a quantity of stone was placed in the eastern portion of the wharf and the shed was repaired. Expenditure, $999.42.

During the years 1896 up to 1897, repairs were made, the flooring completed and the eastern face of the cribwork completed, at an expenditure of $1,963.75.

During the year 1899, a landing slip was built on the eastern side of the pier, at a cost of $1,000.27.

In 1899-1900, 50 feet of the outer end was sheathed and 200 feet of the flooring was renewed with 3-inch spruce and the shed was painted. Expenditure, $501.

During the year 1902-3, the work done consisted of general repairs to the flooring, a new slip, sheathing and repairs to the shed. Amount of expenditure, $657.91.

During the year 1903-4, 24 feet in length by 50 feet in width and 34 feet high was sunk in 13 feet depth at low water spring tides. Expenditure, $3,048.04.

During the year 1904-5 the work done was the completion of the block built last year, 22 by 50 feet and 35 feet in height, with 13 feet of stringers, planking and sheathing was done, and some repairs were made to the wharf. Expenditure, $1,192.87.

During the year 1905-6, the levelling of the outside pier, which had sunk, was done, a shed with a waiting room was built. Expenditure, $1,001.38.

During the fiscal year 1906-7 the shed, commenced in 1905-6, was completed, and the flooring and sheathing repaired. Expenditure, $1,002.53.

ASHUAPMOUCHOUAN AND PERIBONKA RIVERS.

Ashuapmouchouan river, in the county of Chicoutimi, is one of the tributaries of Lake St. John, and is navigable up to St. Félicien.

In view of giving more water in the channel, at extreme low water, two dikes were commenced in 1905-6, one at St. Prime and the other at St. Félicien.

Amount expended, $3,999.99.

The work done, during the fiscal year 1906-7, was the continuation of these two dikes.

The dike at St. Prime is built for a length of 1,600 feet by 12 feet and 8 feet in height. This dam is completed.

The dike at St. Félicien is 2,000 feet in length by 12 feet wide and 8 feet in height; it will have to receive brush and stone.

A dike was commenced at the mouth of the River Peribonka, near the outlet of Little Peribonka, and 1,400 feet was built.

Amount expended during the year is $4,992.98.

BAIE DES BACONS.

Baie des Bacons is situated on the north shore of River St. Lawrence, in the parish of Mille Vaches.

Baie des Bacons is a long reef, and there is a wharf which is used to load timber, cordwood, &c.

During the fiscal year 1906-7 boulders in and close to the channel were blasted and removed. Expenditure, $250.43.

BAIE ST. PAUL.

Baie St. Paul, a village in the county of Charlevoix, has a population of 1,500, and is situated on the north shore of the River St. Lawrence, sixty miles below Quebec. It is built on both sides of the 'Rivière du Gouffre,' which is a tributary to the St. Lawrence, and empties into a large bay, three miles wide. The bay is dry at low tide.

During the last fiscal year, in order to give more facilities for the landing of steamers calling to the wharf of Cap-aux-Corbeaux, a crib, 50 feet long by 20 feet wide, was built on the northeast side of the wharf. This work was done to allow the removing of the western movable slip, some 80 feet further in shore. Minor repairs were also made to the flooring, freight shed and end of movable slip. The crib above mentioned is not completed, the work having been stopped in December last on account of the prevailing stormy weather.

The expenditure for the fiscal year 1906-7 amounts to $3,587.29.

BARACHOIS DE MALBAIE.

Barachois de Malbaie, Gaspé county, is a large parish and municipality situated at the head of Malbaie, some twelve miles east of Percé, the shiretown.

Barachois, on account of the large area of rich farming lands situated along the four rivers that form the barachois, of the important lumber firms that have built their mills along the Barachois, and of its first-class fishing harbour, now that the government has started a training pier to improve the entrance, may be considered the most promising centre in Gaspé peninsula.

Until the government started the training pier now under construction, the fishing boats could not safely enter or go out of the harbour at falling tide and at low tide, on account of shifting sand bars, they had to remain outside and wait for the rising tide to come in. Many a good day's fishing was lost thereby, many a sad accident happened and even lives were lost.

During the fiscal year 1904-5, a crib, 100 by 23 by 18 feet, was partly built and placed into position at 590 feet from extreme high water mark; the approach thereto from said high water mark was built of fascine mattress with brush and stone filling.

During the fiscal year 1905-6, the 100 foot crib was completed, the roadway filled, with the exception of an average of 5 feet, and of a new crib, 120 feet long, built and secured into position.

During the last fiscal year, the outside crib of 100 feet was built up to 4 feet below coping and partly ballasted.

The expenditure during the last fiscal year was $1,191.31.

BASSIN.

The Bassin is a large parish at the centre and west end of Amherst island. The population is composed of Acadian fishermen engaged mostly in cod fishing. On the south shore of Amherst island, opposite the said fishing establishment, there is no shelter wherever. A small breakwater was decided upon. Two cribs 66 by 25 by 20 feet high were built, secured into place and completed with the exception of the sheathing.

Spring tides rise 4 feet; neap tides, 2 feet.

The expenditure durinfi the last fiscal year was $1,191.31.

BEAUPRÉ.

Beaupré is situated on the north shore of the River St. Lawrence, twenty-four miles below Quebec, in the county of Montmorency.

During the fiscal year 1906-7, the construction of a new wharf was started at Beaupré. This construction consists of a close faced timber crib, filled with ballast. The crib is 250 feet in length, 12 feet in width and an average height of 16 feet. At the end of last year 70 per cent of the construction was completed.

The expenditure for the fiscal year 1906-7 amounts to $6,625.07.

BELOEIL.

Beloeil is an incorporated village in Verchères county on the north side of Richelieu river and a station on the Grand Trunk railway, twenty-one miles northeast of Montreal.

South of the Grand Trunk Railway bridge which crosses the river at Beloeil, the government built a number of piers and booms on both sides of the channel to facilitate the passage of steamers and barges coming down the rapid current of the river and going through the narrow passage of the draw-bridge. There were eight piers, four on each side of the channel, and from 80 to 100 feet apart. From 1885 to 1896, repairs were made to the booms and piers at a total cost of $3,191.95.

In 1896-7 it was found that the guide-piers on the west side of the river were in such bad condition that they could not be properly repaired, and an entirely new line of guide works was adopted. It was decided to build a solid cribwork wall from the Grand Trunk Railway pile abutment upward, following a line of a 15 degree curve (about the natural curve of the shore) for a distance of 337 feet, to remove the four old piers and booms, and to dredge a wider channel for the free passage of boats.

The work carried out by day labour was commenced during that fiscal year and completed in 1899-1900, at a cost of $17,444.67, including the dredging.

In 1903-4 and 1904-5 the top of the four guard piers on the east side of the river were partly renewed at a total cost of $2,350.02.

In July, 1905, the booms on the eastern side of channel were completely renewed at a cost of $607.24. On the western side of the channel the wooden flooring of guide-piers was removed and replaced with earth and sand. Further minor renewals to the boom below the bridge were also made. All these repairs, done by day labour, were completed at the end of October at a total cost of $1,173.19.

During November and February last, the guide-pier on the western side of the river was refilled with gravel; a small crib pier, adjoining the old Parizeau wharf on western side of river, below Grand Trunk Railway bridge, was built to better moor downstream end of boom, and a timber arrangement to the middle of boom, on east side of river, opposite guide-pier, was made, so as to prevent its overturning by the current and vessels. Total expenditure during fiscal year of 1906-7, $1,439.38.

BIC.

Bic, on the south shore of the St. Lawrence, in the county of Rimouski, about 170 miles below Quebec, is a favourite summer resort.

Its harbour affords the best natural shelter for vessels of moderate draught.

Spring tides rise 16 feet; neap tides, 8½ feet.

In order to provide more facilities for landing and also to accommodate the traffic with the north shore, which is growing more extensive every day, it was decided to build a wharf where vessels could land at all stages of the tides.

The work will consist of an approach 500 feet long, from Pointe à Coté to Ile au Massacre, and following the northeast shore of that island a distance of 450 feet, and an outside section 300 feet in length giving a depth of water of 10 feet at low water spring tides.

The work commenced in May, 1906, and up to June 30 part of the cribwork approach, between Pointe à Coté and Ile au Massacre, was built.

During the nine months ended March 31, 1907, the approach was completed; it is as aforesaid, 500 feet long, 21 feet wide with a mean height of 13 feet. The construction is open-faced, with ends of cross-ties, projecting outside the faces, between fenders.

A considerable amount of blasting was also done on the island, where the road is located.

A tract of land on Ile au Massacre, including the right of way, has been bought for the price of $350

Expenditure during the last fiscal year, $5,969.64.

CANNES DE ROCHES.

Cannes de Roches is a small fishing cove situated at the foot of the Percé Mountains, and the only harbour for the fishermen from the mountains and from the settlement of Corner of the Beach, on the west side of Malbaie bay.

During the latter part of the fiscal year 1904-5, the sum of $999.66 was expended towards making preparations and buying the materials to build a small breakwater, to protect the cove from the easterly winds. During the fiscal year 1905-6 a crib of 80 feet was sunk into position, built up to coping and extended 50 feet towards high water mark, giving a total length of 130 feet. During the last fiscal year, a crib 80 feet long was built, secured into position and completed.

The expenditure in 1906-7 was, $2,023.64.

CAP-À-L'AIGLE.

Cap-à-l'Aigle is situated some six miles below Murray bay, in the county of Charlevoix.

During the last fiscal year, the flooring of the wharf was completely renewed, minor repairs were also made to the buildings.

The expenditure for the fiscal year 1906-7 amounts to $455.22.

CAP CHAT.

The sum of $75 was spent for removal of stones in fishing cove.

CAPE COVE.

Cape Cove, Gaspé county, is an important fishing station on the coast of Gaspé, some nine miles south of Percé, the shiretown. It is a port of call for steamers plying between Montreal and Pictou, and between Dalhousie and Gaspé basin.

In 1905, the department decided to construct a landing pier at this place, and in August, 1906, a contract was entered into with Mr. John Burns, for the construction of a length of that pier, 450 feet, for the sum of $13,300. The work was completed in November, 1906.

Expenditure during 1906-7, $4,965.51.

CHAMBORD.

Chambord, in the county of Chicoutimi, is situated on the southeast side of Lake St. John, twelve miles east of Roberval.

Chambord is the junction for the Quebec and Lake St. John Railway of the Roberval and Chicoutimi branches.

During the year 1903-4, a certain quantity of timber was purchased, in view of the construction of a wharf at that place. Amount expended, $1,304.92.

During the year 1904-5, a contract for the construction of a wharf was awarded in the sum of $9,350.

The work done during the year consists of seven piers of 25 by 20, with a headblock of 30 by 50 and an abutment of 40 by 20 feet. The whole is completed.

The depth of water at outer end is 7 feet; in spring, water rises 14 feet. Amount expended, $8,000.

During the fiscal year 1905-6, an approach and a freight shed were built. Expenditure, $736.31.

CHATEAUGUAY.

Chateauguay is a post village in Chateauguay county, near the mouth of the Chateauguay river, fourteen miles southwest of Montreal, and a station on the New York Central Railway. Population about 250.

In the autumn of 1895, the old private wharf at Chateauguay was entirely renewed by the government. A row of close-faced pile work, 145 feet in length, including 128 piles of 12-inch flatted hemlock timber, was driven to an average depth of 8 feet along and at an average distance of 4 feet from the front face of old wharf. The space between the wharf and the piling, and the depressions and holes in the former were filled with stone, over which a layer of gravel 2 feet thick was laid for a roadway. Cost, $1,296.47.

During October and November, 1906, the row of close piles was cut to low water level and a new face, composed of solid wall of concrete mixed 1:3:5 and properly reinforced with vertical and horizontal 1½ inch iron bars was substituted. This wall is 144 feet long with returns of 5 feet at both ends, 2 feet thick at bottom and 1½ feet at top, 6 feet high, while every 20 feet, 12 feet long anchor bars are embedded in 1 cubic yard blocks of concrete surrounded with stone. Two 8 by 8 inch tamarack fenders were placed to protect the outside face. Expenditure during last fiscal year was $7,570.06.

CHICOUTIMI.

The town of Chicoutimi, in the county of the same name, is situated on the south shore of the Saguenay river, seventy-one and half miles above Tadousac, at the head of navigation. The Richelieu and Ontario Navigation Company has a daily service from Quebec to Chicoutimi, during the season of navigation, with passengers, freight and mails.

Construction.—The landing pier was commenced in 1873 by the St. Lawrence Tow Boat Company, and completed by the Dominion government to whom it was

handed over in 1874, at a cost of $14,193.40. From 1874 to 1882 inclusively, it was extended and improved, at a total cost of $2,863.73. The pier was then 282 feet long, and 30 feet wide, with a headblock, 34 feet long and 127 feet wide, forming two wings, respectively 70 feet and 27 feet wide. On the upper or 70-foot wing, was a combined waiting room and office 20 feet square.

In 1883, the shore end portion of the approach, on a length of 38 feet, was embedded in an embankment, upon which the station and sheds of the Chicoutimi branch of the Quebec and Lake St. John Railway are now erected. The whole space, 210 feet in length, between the upper wing and the shore was filled with slabs. A storehouse, 40 feet long and 24 feet wide, was erected on this extension, at a total cost of $2,145.84. The filling, however, was not carried up to the level of the top of the pier until 1885, when the extension was floored in a similar manner to the rest of the work. A separate waiting room was also erected on the lower or 27 foot wing. Amount expended $2,242.11.

In 1890, a cribwork retaining wall, 14 feet wide, was commenced along the slab filling, built in 1884, and the flooring was repaired, where required, at a total cost of $1,005.81.

In 1891, the cribwork retaining wall was completed, a shed, 28 by 29 feet, built at the southern end of the pier and the flooring repaired at various places, at a cost of $1,802.70.

In 1897, the pier was again widened by the addition of cribwork, 30 feet wide along its lower or eastern face, from the lower wing to shore, a distance of 210 feet. The cribwork was fully ballasted and floored with 3-inch tamarack planks, and 25 fenders were placed along its face.

The pier was also sheathed for a length of 50 feet, along its northern face, in order to complete the sheathing all around the work. Amount expended, $4,992.96.

As now completed, the pier is 245 feet long and 130 feet wide. It is 29 feet high above the bottom of the river at its outer end, which stands in about 8 feet of water at low water spring tides.

Repairs.—In 1883-4, minor repairs were effected.

In 1887, a slip was built at the outer end of the pier.

In 1889, the flooring of the pier was almost entirely renewed and six fenders, 14 inches square, were placed along its outer face.

In 1892 and 1893, the flooring of the pier was completely renewed on a length of 210 feet and a width of 110 feet, with red spruce planks, 5 inches in thickness; the east side of the structure was raised 18 inches, the waiting room was painted both inside and outside, and two mooring posts were renewed. The expenditure incurred during the two years was $3,024.04.

In 1894, a sum of $1,999.60 was expended for the construction of movable slip and the purchase of two crab winches.

During the years 1895 and 1896, a portion of the outer face and the whole of the eastern face of the structure were resheathed, and a portion of the flooring, not completed in 1893, was laid. Expenditure, $3,991.88.

During the year 1898, the sum of $239.79 was expended on minor repairs to the sheds and waiting room.

During the year 1899, a freight shed, 60 by 30 feet, was constructed on the south side of the pier, for the storage of butter and cheese. Part of the top planking was renewed. The work was done by day labour, at a cost of $1,499.27.

During the year 1900, the pier was raised 3 to 5 feet over the whole surface; stone ballast was placed in the outer end, which was also sheathed with tamarack, and covering was renewed with 3-inch plank, at a cost of $5,050.59.

During the year 1900-1, a new 3-inch tamarack floor was laid on a length of 210 feet and a width of 45 feet.

The northern part of the wharf, for a length of 145 feet, was sheathed, and the sheds were painted. Expenditure, $1,012.12.

During the year 1901-2, the old buildings on the wharf were taken down and new ones erected; the new freight shed measures 60 by 30 feet, and the passengers' waiting room is 25 by 25 feet. These two buildings are covered with galvanized iron and painted three coats inside and outside. On the north side of the wharf, 6 fenders, 11 by 11 inches, were placed, and five snubbing posts were renewed. Expenditure, $1,513.34.

During the year 1903-4, the sheathing on the two other corners of the wharf was renewed with hardwood, new fenders put in at the head of the wharf, the flooring was repaired and a portion of the flooring on shore was replaced with gravel, and other minor repairs were performed. Amount expended, $1,045.03.

During the year 1904-5, the boulders on the east side of the wharf were blasted and removed. Amount expended, $60.

During the year 1905-6, certain repairs were done to the wharf and the freight shed.

During the fiscal year 1906-7, repairs were done to the wharf, the old planking for 80 by 90 feet was removed and replaced by gravel, the rest of the planking was covered with 3-inch spruce deals, a shed was built, 40 by 38 feet, the slip on the west side was repaired and the sheathing on the west side of the wharf was done.

The freight shed was extended 30 by 38 feet; this shed is covered with galvanized iron.

Spring tides rise 17 feet; neaps, 9 feet.

Amount expended during the year, $4,496.10.

CÔTE STE. CATHERINE.

Côté Ste. Catherine is a landing place on the south shore of the St. Lawrence, in Laprairie county, about five miles west of the village of Laprairie. A steamboat ferry plies daily between this place and Verdun, on the opposite side of the river.

The wharf was commenced in October, 1899, and completed in June following, at a cost of $3,199.46. It consists of a close-faced crib head-block, 82 feet long, 20 feet wide, terminated at the upper end by an icebreaker, and an approach, 115 feet long, 18 feet wide, also of close-faced cribwork. The outer face of the block stands in 6 feet of water at low level.

During 1902 and 1903, repairs amounted $436.64 and $493.59 respectively.

The structure having been badly damaged by ice during the winter of 1905-6, extensive repairs were begun in the middle of July last, and completed September 7th, at a cost of $1,379.31. These consisted chiefly in the razing of the whole wharf to low water level and rebuilding same 3 feet. The upstream side of approach was riprapped, handlaid, to a slope of 1 in 1, as a protection against floating ice, and the whole head-block and approach covered with properly hardened layers of small broken stone, gravel and sand. The roadway from public road to approach was also improved. The wharf is now in good condition.

DESCHAMBAULT.

Deschambault, county of Portneuf, is a flourishing village on the north shore of the St. Lawrence and on the Canadian Pacific Railway, forty-one miles above Quebec. A steamer plies semi-weekly to and from Quebec.

During last fiscal year, some 15,000 cubic feet of hard gravel were removed, by hand dredging, in front of new landing pier, to level the approach. The ground around the new waiting room, on an area of 1,000 feet, was also raised and levelled. On the new roadway approach to wharf, about 30,000 cubic feet of stone were added to the building up of the upper end, which is a steep elevation; sidewalks and fences were also placed.

Expenditure in 1906-7, $2,835.76.

DESJARDINS.

During the session of 1904, parliament granted the sum of $11,000 towards the construction of a wharf at Desjardins village, Allumettes island, on the Ottawa river, to accommodate the heavy traffic to and from Pembroke, on the opposite shore.

On June 8, 1904, a contract was let to Mr. Thos. Moran, for the construction of an open-face cribwork landing pier, 120 feet long and 20 feet wide, sheathed, provided with fenders, and built in 6½ feet of water at E.L.W.L.; and an approach, 543 feet long and 16 feet wide at the top, built, partly of open-face cribwork piers united by platforms, and partly of rip-rap. The flooring is 8 feet above E.L.W.L. Work began in August, 1904, and was completed in June, 1905.

Cost of construction amounted to $10,957.42. (For further details see report of 1904-5).

In 1905-6, a gas pipe hand-railing was constructed on the approach at the total cost of $784.20.

During the last fiscal year, the head of the wharf was widened to 36 feet, on cribwork piers and platforms sheathed; the two slips were altered; a combined freight shed and waiting room, 18 by 18 feet, was erected on a cribwork pier, at the inner corner of 'L,' the handrail, 1,080 l. feet, was repaired, and a wheelguard capping was placed along the cribwork approach.

Expenditure during the fiscal year 1906-7, $2,991.28.

D'ISRAELI.

D'Israeli is a post settlement in Wolfe county, at the head of Lake Aylmer, and a station on the Quebec Central Railway, some fifty-two miles northeast of Sherbrooke.

The construction of the wharf at that place was begun by day labour at the end of September, 1904. The work consists of a close-faced 12 by 12 timber crib headblock, 50 feet by 36 feet and 17 feet high, standing fully ballasted with stone in 12 feet of water at mean level. A 30-foot span, composed of red pine beams every 3 feet supporting 3-inch pine flooring connects headblock with crib abutment terminating stone approach, 200 feet long, 18 feet wide at top, with sides inclined 1 in 1½. A double 1½-inch iron pipe railing with 6-inch round cedar posts every 10 feet completes the whole structure.

At the end of fiscal year 1904-5, the stone approach had been three-quarters completed and the crib headblock about half so, at a cost of $4,990.62.

During 1905-6, the headblock was completed. Work was suspended in October, the yearly appropriation being exhausted. Expenditure, $1,514.19.

Work was resumed in September last, and the whole structure completed October 23 following, at a further cost of $706.84.

DOUGLASTOWN.

Douglastown, situated in Gaspé bay, is a village of fishermen and farmers, standing on the rising ground at the south side of the entrance to the St. John river. Its population is between 1,600 and 1,800.

As the pier was settling towards the centre, on the outside face, some 400 cubic yards of stone ballast had to be placed along that part of the face-work. Fenders with walings were placed along inside face.

Expenditure in 1906-7, $283.12.

ENGLISH RIVER, AT ST. JEAN CHRYSOSTÔME.

St. Jean Chrysostôme is a post village in Châteauguay county, Quebec, on the Grand Trunk Railway, four and one-half miles from Aubrey station and nine miles from Howick, where the English river flows into the Châteauguay.

Every spring, during the freshets, the English and the Black rivers overflow, and cause considerable damage to the village and parish of St. Jean Chrysostôme, an area of over 2,600 acres of good land being held for several days under from 3 to 5 feet of water. In order to prevent, or at least considerably minimize these disastrous floods, it was decided to deepen the bed of the English river from its confluence with the Black river, opposite the village of St. Jean Chrysostôme, a distance of 500 feet downstream by a width of 60 feet. In this area the bed of the river is solid rock, some 4 feet higher than the normal bottom, thus acting as a dam which causes the river to overflow upon the surrounding low lands.

Work was commenced in the autumn of 1903. During 1903-4 some 100 cubic yards of solid rock were blasted and removed, at a cost of $2,875.69.

In 1904-5, about 1,200 yards of solid rock were removed. With the aid of railroad plough and two horse scrapers, clay, gravel, boulders and hard-pan, on a length of 500 feet by a width of 50 feet and an average depth of from 1 to 2½ feet, representing some 1,600 cubic yards, were removed at a cost of $4,823.55.

During 1905-6, the blasting and removal of solid rock, some 300 cubic yards, was completed. Hard-pan, boulders, gravel and clay representing some 2,500 cubic yards were ploughed, scraped and removed, at a cost of $2,983.90. All the above work was done on a dry bottom, necessitating the temporary damming of both English and Black rivers.

In September and October last, the bottom of the river, for a length of 1½ miles, was cleaned of boulders, and the improvements completed, at a further cost of $1,810.14.

FABRE.

Fabre, a post village eleven miles south of Ville Marie, on the Quebec shore of Lake Timiskaming, is the centre of a thriving farming district of Pontiac county.

In 1903, parliament appropriated $2,000 towards the construction of a wharf in Lavallée bay. On account of some local interference in the location of said wharf no work was done during the fiscal year 1903-4.

The sum of $2,000 was revoted in 1904. On June 30, 1905, practically all required materials had been procured at a cost of $1,329.03.

The projected wharf to be of pilework, having a frontage of 40 feet and extending a distance of 240 feet from 7 feet depth contour to shore, followed by a stone approach, 16 feet wide at the top, 200 odd feet long to the roadway. Elevation of floor, 12 feet above O.L.W.L.

On account of extreme low water in 1904, it was deemed advisable to place the front of the wharf 32 feet further out, and have the floor 13 feet above O.L.W.L. Parliament again granted the sum of $2,000 at its session of 1905. Construction was started in February, 1906, and the wharf, although not completed was in regular use by the end of the fiscal year.

Further work was done during July and August, placing the wharf in a state of serviceability. The wharf, as built, consists of a pilework head, 80 feet deep, 40 feet wide and resting in 9 feet of water; a pilework approach, 16 feet wide and 178 feet long continued by a stone approach, 216 feet long, to shore. The wharf is provided with slip and freight shed.

As a consequence of the movement of ice in the spring of 1906, a few piles, at the head of wharf, were broken. In March, 1907, these piles were replaced and two ice-piers framed on pilework 12 by 16 feet were built 40 feet apart and 40 feet north of the wharf. The flooring, capping and sway-bracing required in connection with new piles, however, was only completed on April 18, 1907.

Expenditure during the fiscal year 1906-7, $2,029.36.

FATHER POINT.

Father Point, in the county of Rimouski, is on the south shore of the St. Lawrence, six miles below the town of Rimouski. Most of the ocean liners call there to

land or take in their pilots. The point is one of the few places on the south shore of the St. Lawrence where deep water can be found at a relatively short distance from shore.

A self-registering tidal gauge was established here some years ago by Department of Marine and Fisheries. There are also a powerful compressed air fog-horn and an acetylene gas lighthouse, and a Marconi wireless telegraph station.

It was desirable a few years ago that a deep water wharf be constructed at Father Point; tenders were called for, and on November 8, 1901, a contract was awarded to Messrs. Heney & Smith for a section of the structure, 600 feet long.

The work was carried out during the years of 1902 and 1903 and completed by the beginning of July, 1904, the amount of contract being $57,821. In May, 1904, a new contract was entered into for the construction of an additional length of 200 feet. The work was completed on November 8, 1905; the contract price was $44,300. The outer end of the wharf stands in 18 feet of water at extreme low spring tides.

In the month of June, 1906, during the fog, the steamer *Pomeranian* struck the wharf at about 300 feet from the outer end; the damages were considerable and heavy repairs were necessitated. A length of 140 feet, by the full width, had to be demolished down to the extreme low water line. The whole of the material was taken ashore. In the reconstruction nearly all the timber was renewed; with the exception of the decking of and hardwood sheathing, the repairs are nearly completed.

The repairs were performed by day labour and the expenditure for the nine months ended March 31, 1907, amounted to $7,387.95.

GATINEAU POINT.

Gatineau Point village, in the county of Wright, is at the intersection of the Gatineau and Ottawa rivers, two miles from Ottawa.

During the fiscal year 1885-6, a cribwork wharf having a frontage of 107 feet and a depth of 8 feet at lowest water, with approaches providing for the different stages of water level, was built at this place; also a pile work retaining wall, 230 feet long, to protect the bank and roadway on the upstream side of the wharf. (For further information see annual report 1904-5.)

During the fiscal year 1905-6, a permanent retaining wall of concrete cribwork was built 17½ feet high and 231 feet long.

The backfilling, however, could not be proceeded with on account of cold weather, and work was discontinued for the winter.

The work of completing the retaining wall was performed during August and October, 1906, at a cost of $1,954.25.

The wharf was improved in August, 1906, by easing the grade of the lower landing and building up the down hill wall for better protection, at a cost of $120.

Expenditure during the fiscal year 1906-7, $2,306.45.

GRAHAM.

Graham is a post village in the municipality of Como, on the south shore of Lake of Two Mountains, thirteen miles northwest of Vaudreuil, and four miles east of Rigaud

In the autumn of 1899, the government got possession, free of charge, of Mr. Graham's wharf, together with right of way thereto, 435 feet long and 30 feet wide at the foot of La Montée Ste. Marthe. A new structure was immediately commenced by day labour; it was opened to traffic in June following, after an expenditure of $1,125.76, and completed in November, 1900, at a further cost of $3,999.87.

The new wharf consists of:—

(*a*) A pile work headblock 98 feet long and 33 feet wide.

(*b*) A solid stone embankment 240 feet long, 24 feet wide on top with hand railing and slopes on both sides, of one in one.

(*c*) A storehouse and waiting room 18 by 24 feet.

During the spring of 1902, a small storehouse, 15 by 15 feet, was erected on southwest angle of wharf and minor repairs were made, at a cost of $803.47. Other repairs in 1903 cost $317.

During October last, a new 3-inch pine flooring was laid over the old one, some broken binders replaced and the guard railing painted. Expenditure, $455.56.

GRAND RIVIÈRE.

Grande Rivière, county of Gaspé, is the name of an important fishing centre, some twenty-one miles southwest of Pereé.

The new shed, 25 by 30 feet, was completed, and the old shed repaired. The sheathing of the wharf was well secured by bolts, and new fenders with longitudinal walings placed along the inside face and at the outside end.

The expenditure during the last fiscal year amounted to $648.15.

GRANDE BERGERONNES RIVER.

Grande Bergeronnes, Saguenay county, is on the north side of the St. Lawrence, eighteen miles below Tadousac.

The entrance of the River Grandes Bergeronnes being obstructed by boulders, a channel of about 150 feet was cleared from the entrance to the village, for a distance of one mile.

In the years 1887, 1895, 1899, 1901 and 1902, a total sum of $1,254.32 was expended.

During the year 1902-3, the work was continued in the channel. Blasting was done by day labour. Expenditure, $398.77.

During the year 1903-4, work was continued in completing the removal of boulders in the river. Amount expended, $224.38.

During the years 1904-5, 1905-6, the sum of $500, and in 1906-7, further sum of $506.24 were expended in the continuation of the same work.

GRINDSTONE.

Grindstone is a village on the south side of Grindstone island, four miles east of Etang du Nord. The population is composed mostly of Scotch farmers and Acadian fishermen. For years past most of the freight for the Magdalen Islands has been landed here and the building of landing pier was greatly needed.

In the fiscal year 1902-3, a landing pier was started; 115 feet of close-faced cribwork, of an average width of 23 feet and average height of 15 feet, was built. An approach of 605 feet, 25 to 50 feet wide, and of an average height of 9½ feet, on the outer face, was built, along the eastern side of Grindstone Cape. The outside face of the approach, exposed to the heavy easterly gales from the Atlantic ocean, is protected by a sheathing of split spruce logs, held in place by two sets of walings fastened by cross-ties and a doube set of posts. A mattress of brush was laid under the filling taken from the cape.

During the fiscal year 1902-3, the pier was extended 255 feet, with an average width of 25½ feet and an average height of 19 feet to floor level.

In the fiscal year 1903-4, the pier was extended 200 feet with an average height of 22 feet and an average width of 28½ feet.

During the last fiscal year, a crib of 100 feet by 30 feet wide by 28 feet high was built, secured into position and completed.

Total expenditure during 1906-7, $4,547.98.

GRONDINES.

Grondines, a post village in the county of Portneuf, is situated on the north shore of the St. Lawrence, forty-eight miles above Quebec, on the line of the Canadian Pacific Railway.

Two lighthouses are located at this place. A steamboat from Quebec calls here twice a week. Population of village, 440; population of parish, 1,500.

The sum of $2,508.68 was expended last fiscal year in completing the side road of approach from public road to new government wharf, also the removal of large boulders and reefs, obstructing approaches to wharf.

The roadway, over a beach lot, the property of the Crown, is of open-faced crib-work, fronting on river, and of dry-stone wall on opposite side; the space between is filled with ballast stone, broken stone, coarse gravel and sand in different layers, its average height being 3 feet 9 inches all over with a width of 31 feet and 330 feet in length.

Substantial guard-railing with heavy posts, well painted and secured, are placed on both sides, forming 700 feet of railings. Two substantial culverts were built in roadway, to discharge water coming from fields south of road; the full height and length of outer face is sheathed with 3-inch pine deals and cedar timber exclusively was placed in work. Some 17,000 cubic feet of further grading and levelling had to be done at east end of road, following it up to the municipal road outlet, in order to divert the water in heavy rains from damaging our own work.

GROSSE ILE.

During the last fiscal year, the northeast corner of the hospital wharf, that was cut at low water mark by the ice, was repaired at a cost of $548.25.

IBERVILLE.

Iberville is an incorporated town in the county of the same name, situated on the east shore of the Richelieu river, opposite St. John's, twenty-eight miles southeast of Montreal. Population, 1,512.

In March, 1899, a wharf was begun at the foot of Market street and completed the year following at a total cost of $8,883.26. The structure consists of:—

(a) A stone embankment 130 feet long and 24 feet wide with slopes of 1 and 1 and guard-railing;

(b) A trestle approach 150 feet long and also 24 feet wide, with guard railing on both sides;

(c) A pile headblock 150 feet long, 40 feet wide, with two slips, inner guard railing, and a storehouse 20 by 24 feet. The outer face stands 15 feet high and 6 feet of water at lowest level. In order to facilitate handling of freight, a horse derrick was placed on wharf.

In 1901, minor repairs cost $17.48.

During 1903-4, half the floor of headblock was renewed, that of the approach was redoubled for a width of 8 feet, and the storehouse and iron guard-railing painted. Expenditure $412.84.

In September last, very urgent repairs to the flooring of headblock were made at a cost of $140.84.

ILE VERTE.

The village Verte, in the county of Temiscouata, is situated on the south shore of the St. Lawrence, sixteen miles below River du Loup and 130 miles east of Quebec.

Spring tides rise 19 feet; neap tides, 12 feet.

Owing to the growing traffic in sea grass and to give people engaged in that industry more facilities of landing, the construction of an inclined slip, on the west

side of the wharf was commenced in the month of August, but could not be completed.

The slip is 230 feet long and 12 feet wide.

Several boulders were also blasted and the broken pieces placed in the slip for ballasting.

Expenditure in 1906-7, $1,199.99.

ISLAND HOUSE OR GRANDE DÉCHARGE.

Island House, Chicoutimi county, is situated at the head of the Grande Décharge of Lake St. John, seventeen miles from Roberval. It is a sporting resort with good hotel accommodation. A steamer, the *Mistassini* makes a daily trip from Roberval to Island House.

In 1894-5 the floating pontoon, built by the hotel proprietor, for landing passengers, was transferred to the Department of Public Works and a sum of $500 was expended in building an extension thereto, 40 by 25 feet. The pontoon is now 100 by 25 feet, built of four rows of round cedar logs, set close lengthwise and crosswise, with floor-stringers every 4 feet, and covered with 2-inch planking. The outer face is provided with nine guard-fenders reaching a height of 6 feet above the flooring.

During the fiscal year 1903-4, the floor-stringers were renewed and a new flooring was put on; the fenders and the mooring posts were also renewed. Amount expended, $182.17.

ISLE PERROT SOUTH.

Isle Perrot, about seven miles long and three miles wide, is in the county of Vaudreuil, at the confluence of Rivers St. Lawrence and Ottawa, between Lakes St. Louis and of Two Mountains. Two bridges on the Grand Trunk Railway and Canadian Pacific Railway connect it with Vaudreuil and Ste. Anne de Bellevue. Population about 800.

In 1886-7, a contract was entered into with Mr. D. O'Brien for the construction of a pier on the south shore of the island, about one and a half miles below parish church consisting of a crib block 120 feet long, 30 feet wide, with return of 34 by 16 feet in rear of east end and sunk in 8 feet of water, at a distance of 581 feet from shore. It was completed in the year 1887-8 at a cost of $5,264.26.

During 1888-9 and 1889-1890, the approach was built at a cost of $7,156.29. It consists of nine cribs, 24 feet wide, five being 20 feet long and four 12 feet long, placed at intervals of 22 to 25 feet and spanned by stringers and planking, and of a shore abutment 182 feet long and 16 feet wide. A freight and shelter shed 16 by 20 feet completed the structure.

In 1896-7 general repairs cost $395.93.

In September, 1899, a number of planks on the approach were renewed at a cost of $165.81.

During September and October, 1900, the sheathing of ice-breakers was renewed with 8-inch tamarack, as was two-thirds of the flooring and a number of hemlock pieces and stringers. The guard-railing was repaired and painted, and the stone embankment regravelled. Cost, $876.04.

During June, 1904, minor repairs were made to the flooring and guard-railing at a cost of $437.80.

In June, September and October, 1905, and spring of 1906, the flooring of the headblock and of part of the approach was renewed with 3-inch pine planks, and about three-quarters of the stringers of approach replaced. Total cost, $1,051.27.

In September and October last the slanted face sheathing of the five cribs, some top timbers, a few of the stringers and the guard-railing were all renewed. The upstream side of shore abutment, 182 feet long, was riprapped, handlaid, and sloped 1 in 1, for protection against ice shoves. Cost, $856.07.

JESREY COVE.

A sum of $198.93 was spent towards improving that small fishing cove.

KNOWLTON LANDING.

Knowlton Landing is situated on the west shore of Lake Memphremagog, in the county of Brome, about eleven miles from the town of Magog. It is a summer resort.

During the fiscal year 1891-2, an extension to the pile wharf at this place, built many years before, was constructed. This extension of 51 feet by 75 feet was built of hemlock piles, covered with stringers and 3-inch planking at a cost of $971.22. There is a depth of 9 feet at low water at the end of the present wharf, which will permit of steamers calling at all stages of the water.

During the next year six fender piles were driven along the front of the wharf and three at each corner. A warehouse, with waiting room, 40 by 23 feet, was built on shore immediately west of the wharf, the whole at an expenditure of $918.09.

In the fiscal year 1899-1900, all the stringers and planking were renewed, also the corner fender piles, and some repairs made to the storehouse and stone approach. The work was carried out by day labour at a cost of $714.12.

During March, April and June, 1904, several caps and stringers were renewed, general overhauling of the flooring made and two iron nigger heads substituted for the old hemlock mooring posts. Expenditure, $176.52.

In July, 1904, these repairs were continued and completed at a further cost of $60.99.

The wharf, as it stands to-day, is composed of a pile head block, 75 by 25 feet, of a trestle approach 118 feet long and from 35 to 16 feet wide, and of a stone and earth embankment some 10 feet long and 20 feet wide.

Last March, work was commenced on the approach. It is the intention to make it all stone, 20 feet wide at top, with riprap sloped 1 in 1 on both sides. The flooring of headblock will also be renewed.

LAC Â BEAULIEU.

Lac à Beaulieu, in the municipality of Les Grandes Bergeronnes, is situated three miles north of the village.

The outlet of Lac à Beaulieu is obstructed with boulders and rock, which render the floating of logs very difficult.

During the year 1903-4, a certain quantity of boulders and a point of rock were blasted. Expenditure, $297.76.

Same work was continued during the following years: 1904-5, with an expenditure of $200.36; 1905-6, $202.69, and 1906-7, $208.25.

LACHINE.

Lachine is an incorporated town in Jacques Cartier county, on Lake St. Louis, and on the Grand Trunk Railway and Canadian Pacific Railway, eight miles south-west of Montreal.

The old wharf, built in about 1895, by a Mr. James Howley, and sold later to the St. Stephens' Athletic Association, the present proprietors, and now in a very dilapidated condition, is composed of 6 open-faced, stone-filled and plank-sheathed cribs of irregular dimensions, averaging 9 by 12 feet, except the headblock, which is 26 feet by 17 feet and stands 13 feet high, sunk in about 6 feet of water. These cribs are spanned with timber beams supporting flooring. The right of way to St. Joseph street is 119 feet long and some 10 feet wide.

Last spring, upon the condition that the proprietors would transfer to the Crown, free of charge, the above structure and right of way thereto, the government undertook to repair it and place it in a serviceable condition. In March, the materials, including

timber and iron were bought, and all the piers razed to low water level. On March 24 work was suspended and materials placed in safety. Expenditure, $1,277.63.

LAKE ST. FRANCIS AT LAMBTON.

Lambton is a thriving post village in Beauce county, at the southern end of Lake St. Francis, and fifteen miles from d'Israeli.

On February 15 last, a contract was entered into with Mr. John Lowrey, of Ottawa, for the construction of a landing pier at Lambton. Contract price, $7,750. It calls for:

(*c*) A solid close-faced and stone filled crib headblock, 70 feet long and 30 feet wide, the outside face standing 20 feet high in 8 feet of water, at extreme low level;

(*b*) A stone approach, 320 feet long and 18 feet wide at top, with sides riprapped and sloped 1½ in 1.

Work was begun at the end of February, and at the end of March, the headblock had been sunk in place and about half completed; about ⅔ of the stone approach were also constructed.

Expenditure during fiscal year of 1906-7, $2,764.23.

LA PETITE PÉRIBONKA.

La Petite Péribonka, in the county of Chicoutimi, is situated on the west side of La Grande Péribonka, near its mouth.

Pulp mill is situated four miles above La Grand Péribonka.

During the year 1904-5, a portion of the snags and obstructions in the channel were removed. Amount expended, $626.16.

During the fiscal year 1905-6, the work of removing snags and obstructions was continued. Amount expended, $610.14.

LES CUISSES D'ALMA.

Les Cuisses d'Alma, in the Little Décharge of Lake St. John, is three miles from the lake, in the parish of St. Joseph d'Alma, and seven miles from the village.

There are three rocks called 'les Cuisses d'Alma' and an island, which obstruct the Little Décharge.

In 1901-2, blasting was done on the east side. Amount expended, $575.92.

In the year 1902-3, the east side was completed and a portion of the west side was done. Amount expended, $1,229.37.

During the year 1903-4, the blasting of the two points obstructing the Little Décharge was completed; work was continued on the little island below. Amount expended, $1,477.59.

During the year 1904-5, the blasting of the little island was continued. Amount expended, $994.31.

During the year 1905-6, same work was continued. Amount expended, $1,015.96.

During the fiscal year 1906-7, the work done was the continuation of the blasting at the island, below 'les Cuisses d'Alma,' to enlarge the channel. Amount expended, $996.02.

LES EBOULEMENTS.

This village is situated on the north shore of the River St. Lawrence, seventy miles below Quebec.

During the last fiscal year, the southwest corner of the wharf, was rebuilt, six fenders were also placed and minor repairs were made to the movable slip.

The expenditure for the fiscal year 1906-7 amounts to $892.46.

LES ECUREUILS.

Les Ecureuils, a village in the county of Portneuf, is situated on the north shore of the St. Lawrence, twenty-eight miles above Quebec. It is distant from any railway communications and difficult to approach by water. Population 600.

The sum of $653.71 was expended in effecting urgent repairs to the wharf, and in filling up with timber and stone ballast, an opening left in the old or first section of present structure.

The subseqtuent addition, in 1904-5, of a headblock of 30 by 40 feet seems to have, in some way, intercepted the free movement of the spring ice, which hugs the shore, on its rounding the Point of Ecureuils at this particular place and, in pressing its way through the aforesaid opening in wharf, forced the two cribs some six inches apart.

In order to strengthen the whole structure, this passage was built up solid on a height of 16 feet, width of 21 feet and length of 22 feet, with 3 inch spruce deal sheathing, full height on both sides, over the 12-inch square face timbers.

LES ESCOUMAINS WHARF.

Les Escoumains, in the county of Saguenay, is situated on the north shore of the St. Lawrence river, twenty-one miles below Tadousac.

The Saguenay Lumber Co. have an extensive saw-mill and a pulp mill at this place.

On May 7, of the fiscal year 1904-5, a contract was awarded to Messrs. Bernier & Beaulieu, for the construction of a wharf at Les Escoumains.

The work was commenced on July 25, 1904, and was suspended for winter on November 1. The work done consisted in the sinking of two cribs, one of 110 feet and the other of 87 feet, and of an approach of 153 feet, forming a total length of 350 feet with a width of 25 feet. The work done to June 30 stands 21 feet in height at outer end. Amount expended, $9,737.91.

During the year 1905-6, the work under contract was completed, and consists in a wharf, 350 feet in length by 25 feet in width, 30 feet in height and 8 feet of water at outer end. The work is of round logs open faced cribwork; stringers are 12 by 12 with a planking of 3 inches; the wharf is sheathed with 4-inch planking and fenders, 8 by 10, are put on at every 8 feet. The whole is fully ballasted with stone. Amount expended during the year $5,016.16.

During the fiscal year 1906-7, the sum of $345.42 was expended in repairs to the wharf, which had been damaged by a sailing vessel.

Spring tides rise 15 feet; neaps, 9 feet.

LES PETITES BERGERONNES.

Les Petites Bergeronnes, in the parish of Les Bergeronnes, is situated on the north shore of the St. Lawrence river, fourteen miles below Tadousac.

There is an important saw-mill on the River Petites Bergeronnes. The entrance of the river being obstructed by boulders, work was commenced to clean the channel up to the saw-mill.

Amount expended during the year 1903-04 is $904.71.

Amount expended in 1904-5, $509.12; in 1905-6, $1,007.99, in the removal of boulders.

The work during the fiscal year 1906-7 was specially at the mouth of the river, a point of rock and boulders being blasted and removed. Expenditure, $1,029.20.

LE TABLEAU.

Le Tableau (Descente des Femmes) is a new settlement on the north side of the Saguenay river, about sixty-one miles from its mouth.

During the year 1902-3, a block of cribwork, 40 feet in length by 30 feet in width, and a return of 30 feet by 25 feet, and also two piers 25 by 25 feet and 25 feet apart, were commenced.

The block was sunk in 18 feet of water. The block and the return forming an 'L' are built of close-faced timber 11 by 11 inches and sheathed on the outer corners with hardwood timber.

A landing slip was built in the outer block and one in return, on the west side. The piers are built of round logs open-faced. Expenditure, $5,035.71.

During the year 1903-4, the work was continued and an approach was built. The corbels and part of the stringers having been laid. Work was done by day labour. Expenditure, $3,018.33.

During the year 1904-5, the work was damaged by ice and had to be re-inforced; the stringers and corbels were completed; fenders of 8 by 10 were put on, and a portion of the planking done. Expenditure, $991.74.

During the year 1905-6, the work done was the sheathing at outer end, and the levelling of the outside pier which had sunk. Expenditure, $597.32.

The wharf of La Descente des Femmes is to-day 219 feet in length by 22 feet, 35 feet wide and 41 feet high at outer end, and 18 feet of water at low water spring tides.

The work done during the fiscal year 1906-7 was the completion of one of the piers, of the superstructure and of part of the sheathing. The piers are fully ballasted with stone. Expenditure, $2,498.53.

LONGUEUIL.

The town of Longueuil, the chief-lieu of the county of Chambly, is situated on the south shore of the River St. Lawrence, nearly opposite the eastern end of the city of Montreal.

Construction.—The Richelieu and Ontario Company owns a wharf at the upper end of the town, but its long distance from the business or centre portion and the increasing trade demanded new wharfing accommodation. At the request of the town council, the department therefore decided in 1886 to build a landing pier at the foot of Alexander street. In November, 1886, a contract was entered into for the construction of the outer portion of the pier which was commenced at a distance of 675 feet from shore. It consisted of close-faced cribwork structure, 430 feet long and a uniform width of 20 feet, apart from its outer 90 feet, which was 30 feet wide. It was completed in 1888 at a cost of $12,491.66.

In October, 1899, another contract was entered into for the construction of a block, 40 feet long and 50 feet wide, along the lower face of the existing pier, at its outer end, and of a close-faced cribwork extension to shore, 675 feet long and 20 feet wide, with six buttresses, 10 feet wide along its lower face. The work was completed in 1891, at a cost of $16,248.30. The landing pier was then 1,105 feet in length, including the block at the outer end, which was 40 feet long and 80 feet wide, the first 90 feet of the pier joining the block was 30 feet wide, and the remaining 975 feet to shore, 20 feet wide. The outer face of the block was 16½ feet high above the bottom of the river, and stood in 7 feet of water at extreme low water.

Repairs.—The portion of the pier completed in 1888, was damaged by ice in the spring of 1889, which necessitated an expenditure of $1,517.77 for repairs. During the spring of 1892, the head of the pier was damaged, and the block, 40 by 50 feet, built in 1890 was carried 10 feet down stream. The opening was filled with cribwork and the plank covering was removed and replaced with stone and gravel, at a cost of $2,196.63.

In the spring of 1893, the head of the pier, with the adjoining 180 feet, was moved bodily down stream by the ice. In order to give additional weight to that portion of the pier, which is most exposed to the action of drift ice, it was decided to widen it by means of cribwork built at an angle with the approach and on a line from the lower inner corner of the head block to the outer corner of the first buttress, a dis-

tance of 354 feet, and to fill with earth and stone the area thus inclosed. A portion of this work was carried out in 1894, when a crib 250 feet long, 12 feet wide and of an average height of 13 feet, was built in the position above described, and the area between it and the original structure filled level with the top of the pier. The work was done by day labour at a cost of $2,948.70. In 1895 the remaining portion, 104 feet in length, of the work commenced in 1894, was completed, and the spaces between the buttresses were filled with close faced cribwork, in order to better enable the work to resist the action of the ice. The expenditure incurred was $4,214.19.

In 1896 some necessary repairs were performed to the sheathing and face timbers of the upper face of the pier at its outer end, and a gravel roadway 12 feet wide was laid from end to end of the structure at a cost of $284.11. Minor repairs were effected to the roadway in 1897 at a cost of $284.56, and during 1897-8 the roadway was again repaired at a cost of $160.66.

During the fiscal year 1898-9, extensive repairs were performed to the upper face of the wharf at its outer end, which had been completely broken up by ice. The damaged portion was removed and rebuilt with close-faced timber 220 feet long, 20 feet wide and 18 feet high. A wing 50 feet long, 20 feet wide, terminated at its upper end by icebreaker 26 feet high, was built on the western side of the wharf at its outer end and at right angles with it; this of close-faced cribwork filled with stone ballast. As the whole structure had unevenly settled, it was raised 1 to 3 feet, and the filling with stone and gravel was not completed at the end of the fiscal year. The work was done by day labour at a cost of $9,986.59. During the fiscal year 1899-1900 the work was continued in July and completed in September at a cost of $2,017.21.

In 1902-3, 500 lineal feet of the top tier was renewed, and the upstream side of wharf, on a height of 14 feet and a length of 500 feet, was sheathed with ¼-inch boiler plates. Cost, $1,123.33.

In October last, very extensive repairs and renewals were begun, work was suspended at the end of November, when about half done, to be resumed with the summer months. Part of 12 by 12 timber on upstream side of wharf was renewed, and the laying begun of a substantial 1:3:5 concrete flooring, including six foot sidewalk on upstream side, from 4 to 8 inches thick and reinforced with transversal and longitudinal 1½-inch iron bars. Total flooring area covered to date is 17,715 square feet.

Total expenditure during the fiscal year of 1906-7, $6,905.04.

LOTBINIÈRE.

The village of Lotbinière, in the county of the same name, is situated on the south shore of the St. Lawrence, about forty miles above Quebec. It has no railway communication, and entirely depends for exchange of supplies on bateaux and steamers from Quebec.

Spring tides rise 14½ feet; neaps, 8½ feet.

Outside of the very narrow channel cleared some years ago off outer end of wharf, the approaches to either side were simply dangerous at all times, being obstructed by reefs and large boulders in every direction inside, outside and up to beach.

Besides clearing a stretch of 400 by 50 to 80 feet in extent of every obstruction in the way, the beach on west side of wharf was hand dredged, levelled down to from 15 to 25 inches, not only giving safe bottom to vessels grounding at low water, but allowing four of the coasting bateaux to lay alongside wharf, end to end, where previously there was room only for one.

Expenditure during the fiscal year ended March 31, 1907, $1,233.05.

MASSON.

Masson village, also known as Buckingham Junction, Labelle county, is situated on the Lièvre river, which empties into the Ottawa, one mile below the village. In the opposite direction, three miles upstream, the Lièvre furnishes extensive water-power which is the 'raison d'être' of several flourishing industries in the town of Buckingham.

The permanent wharf on the Ottawa river, near the mouth of Lièvre river, commenced in 1905, was completed in November, 1906, at a total cost of $14,191.83, including the royalty to patentees of concrete-cribwork.

It consists of a headblock 30 by 90 feet, provides depth of 8 feet at lowest water, with landing for different stages of river level, connected to shore by two approaches, 195 by 18 and 125 by 18 feet. Upper level, 16·25 feet above E.L.W.L., has a gas pipe railing.

A two-story freight shed, 18 by 19 feet, occupies the northeast corner of the head block. The understructure is built of close-face cribwork, on clay and mud bottom. Concrete cribwork, reinforced concrete, structural steel and dry masonry used above extreme low water level.

Expenditure during the fiscal year 1906-7, $3,753.51.

MILLE VACHES.

Mille Vaches, a village in Saguenay county, is situated on the north shore of the St. Lawrence, about forty-two miles below Tadousac.

During the year 1904-5, a certain quantity of timber was bought in view of the construction of a wharf. Expenditure, $998.20.

During the year 1905-6, a wharf was commenced; an approach, 45 feet in length by 20 feet in width, and four piers, 20 by 20 feet, with a space of 25 feet between each pier, was built. The work is done of flatted round logs, corbels and stringers being 12 by 12, with a planking of 3 inches; it is provided with fenders 8 by 10 and fully ballasted with stone.

A certain quantity of good stone was prepared.

Expenditure, $4,070.11.

During the fiscal year 1906-7, four piers were built, and an outside pier, 40 feet in length by 20 feet, was commenced.

Expenditure, $5,018.68.

Spring tides rise 14 feet; neaps, 8½ feet.

MISTASSINI.

Mistassini, county of Chicoutimi and Saguenay, is a settlement on the river of the same name, near its confluence with 'Rivière au Foin' or Mistassini, being thirty-six miles to the northward of Roberval, on the west side of Lake St. John, and eighteen miles above the mouth of River Mistassini on this lake.

In the month of March, 1907, a public wharf was built here for the accommodation of the rapidly increasing number of settlers.

The structure consists of a fully ballasted close-faced timber block 30 feet long, 30 feet wide and 20 feet high at the outer end, and is floored over with 3-inch plank. Along the outer face, there is a depth of 5 feet at low water.

Total cost of wharf, $680.99.

MISTOOK.

Mistook, in the township of Taillon, is situated on the Grande-Décharge of Lake St. John, in the county of Chicoutimi. It is also called St. Cœur-de-Marie.

During the year 1903-4, a pier, 40 feet in length at bottom and 30 feet at top by 20 feet in width and 23 feet in height, was sunk at 150 feet from high water mark. The pier is built with a landing slip in front, sheathed with 8-inch hardwood planks and also a slip on the outer face. The pier is built of open-face round logs and fendered at every eight feet with 8-inch by 10-inch timber. Work was done by day labour. Amount expended, $2,061.04.

During the year 1904-5, the wharf, which was commenced in the year previous, was continued; five piers of 20 by 25 have been sunk. Amount expended, $4,999.99.

During the year 1905-6, the work was continued, at an expenditure of $3,997.05.

During the fiscal year 1906-7, the construction of the wharf was completed. This wharf is built on piers of 20 by 30, with a space of 25 feet; the last pier is 30 by 30, making a total length of 402 feet, a general width of 22 feet and 40 feet at outer end and 8 feet of water at low water.

The four outer piers are provided with ice-breakers, sheathed with hardwood; they measure at bottom 30 by 20 and 40 by 30, are built of round logs open joint, provided with fenders and sheathed. Corbels and stringers are 12 by 12-inch with a planking of 3-inch spruce and they are fully ballasted with stone. Amount expended, $1,995.06.

MONTMAGNY.

Montmagny, in the county of the same name, is on the south shore of the St. Lawrence, thirty-seven miles below Quebec.

It is a thriving little town of about 3,000 inhabitants; important shippings of lumber are made by the Price Bros & Co., and other firms, to European markets.

Besides a pulp mill, there are also two foundries and iron works. The town is built on both sides of Rivière-du-Sud which empties into the St. Lawrence, with a perpendicular fall of 20 feet. Below the fall, the river expands and forms what is called the 'Basin,' affording shelter for vessels of moderate draught.

At the northwest extremity of the basin, stands the government's wharf; it is built across the steep declivity of the channel of the river, and the bottom along its faces does not permit of relatively large vessels to stay there. The wharf is chiefly used for the services, by small boats, of Grosse Ile quarantine, and other opposite islands.

To provide accommodation for the general trade of the place, and the shipping of lumber, the department decided to construct a new wharf, at the rear end of the basin, where all vessels could land. On August 29, 1906, a contract was entered into, for the construction of a landing pier, to consist of a shore section or approach, open-faced, 220 feet in length and 20 feet wide, together with an outside section, closed-faced, 125 feet long and 30 feet wide on top, with a batter of 1 in 12; the contract price being $9,640.

During the fiscal year, some repairs were performed to the planking of the wharf and to the waiting room.

Expenditure, $99.53.

MONTREAL HARBOUR—LOWER DIVISION—MAISONNEUVE.

On July 25, 1900, a contract was entered into with Messrs. Poupore & Malone, for the construction of a high level pier and two bulkheads in the lower division of Montreal harbour. Contract price, $631,033.33. Work was commenced during the same year. During the fiscal year 1900-1, the expenditure amounted to $49,296.45; in 1901-2, to $201,722.69; in 1902-3, to $251,320.47; in 1903-4, to $209,104.96; in 1904-5, $74,442.69, and in 1905-6, $67,855.80.

During the last fiscal year, the stone surfacing was begun and about one-third of the whole quantity put in place.

At the close of the fiscal year, the state of the work may be summarized as follows:—

The work on walls and cribwork is completed, with the exception of a general overhauling and repairing of walls and copings, where defective. The refilling of the area between walls and behind the bulkheads is completed, except the work of levelling and grading the material to proper lines on approximately one-third the total area. The stone surfacing remains to be done on three-fourths the area of about 450,000 square feet.

When these works have been finished, the total work foreseen in the contract and the extras subsequently ordered may be considered complete. It may require a couple of months more.

MURRAY BAY.

The village of Murray Bay has a population of 3,500. It is situated on the north shore of the River St. Lawrence at the mouth of the River Malbaie, eighty-three miles below Quebec.

During the last fiscal year the northeast ladder slip was completely renewed; four fenders of the outer face of the wharf were replaced and minor repairs were made to the flooring.

The expenditure for the fiscal year 1906-7 amounts to $688.19.

NEWPORT.

The village of Newport, in the county of Gaspé, is situated at the mouth of the river of the same name, on the north shore of the Baie des Chaleurs, eighty-eight miles east of Campellton, N.B., and fifty miles west of Caplan.

Spring tides rise 4½ feet; neaps, 2½ feet. The population of the village is extensively engaged in fishing, which is carried on almost to the exclusion of all other pursuits.

The shore end of the old work was repaired, and a length of 35 feet had to be filled with stone and ballast.

The expenditure during the last fiscal year was $261.36.

NOMININGUE.

Nominingue, on the lake of the same name, is a post village in Labelle county, the terminus of the Canadian Pacific Railway, Laurentian Mountains Branch, twenty-three miles north of Labelle and one hundred and twenty-four miles northwest of Montreal.

During the fiscal year 1903-4, the construction by day labour of five wharfs, all of the same head dimensions, was commenced: two on Lake Grand Nominigue, two on Lake Petit Nominigue communicating with preceding one by La Barrière, and one on Lake Bourget, which is a broadening of River Sawga, flowing into Lake Petit Nominigue, about one mile from the village.

They consist of a round timber open-faced crib block, 31 feet 4 inches long, 21 feet 4 inches wide and 12 feet high, standing in 5 feet of water.

The approaches are of different natures and dimensions as follows:—

At Corbin's: 13 feet wide and 148 feet long, of which 108 is stone and 40 feet crib and span.

At Rodier's: 13 feet wide, 120 feet long, formed of three cribs and spans.

At Rivet's: 30 feet wide, all stone, with slopes 1 in 1 and 104 feet long.

At Labelle's: 13 feet wide and 58 feet long, formed of one 20-foot span and 38 feet stone.

At Laroche's: 13 feet wide and 12 feet long span.

During 1903-4, the sum of $2,017.22 was expended. During 1904-5, the wharfs were completed with a further outlay of $2,137.20.

In January last, a sixth wharf was built at the head of Lake Grand Nominigue, some seven acres east of the swing bridge and immediately opposite the Villa Bellevue. The headblock is of the same construction and dimensions as former ones, but only 10 feet high, standing in 4½ feet of water. The 12-foot approach is formed of two cribs, 12 by 9 feet, with 20-foot spans, making approach 58 feet long. End of approach 125 feet from King's highway. Cost, $652.39.

NOTRE DAME DU PORTAGE.

On the south shore of the St. Lawrence, six miles west of River du Loup, in the county of Temiscouata, is situated the village of Notre Dame du Portage; the place

is much resorted to by tourists in summer. Spring tides rise 19 feet; neaps, 13 feet.

During the year 1905, the construction of the wharf, which was begun in 1904, was continued ; a length of 325 feet was completed and the expenditure for that year amounted to $4,999.27.

During the fiscal year 1906-7, an addition, 75 feet long, 28 feet wide by a height of 23 feet was constructed; the work is close-faced, with upright posts every 20 feet, screw bolted to the face-timbers, with a batter of ½ in 12.

The approach to the wharf, 60 feet in length, which was formerly built with stone, and had proved defective to stand the action of the waves, was rebuilt with cedar cribwork filled with stone.

The width of the wharf from the shore end, being only 20 feet, a handrail was placed on the east side, on a length of 400 feet.

The work was done by day labour, during the months of July, August and September.

Amount expended during the year, $5,799.50.

PERCÉ.

Percé, the county town of Gaspé, is situated on the Gulf St. Lawrence, thirty-six miles from Gaspé basin.

On October 3, 1904, a contract was entered into with M. M. Lyons & White for the building of an extension of 150 feet to the northeast pier.

As the old pier had settled from 9 inches to over 2 feet in places, it was decided to level it and to bring the new work to the same height.

Total expenditure during 1906-7, $12,994.

PETIT CAP.

A sum of $100 was spent for removal of rocks.

PHILIPSBURG.

Philipsburg is an incorporated village in Missisquoi county, on the east shore of Missisquoi bay, two miles from St. Armand station. It is a port of entry.

In July, 1895, a contract was entered into for the construction of a wharf at this place. It was completed in 1897, at a cost of $11,142.89, the municipality having contributed $4,000 of above. It consists of a close-faced crib headblock 120 feet long and 25 feet wide, of trestle work approach 296 feet long and 30 feet wide, and of a stone and earth embankment 285 feet long and 30 feet wide at top with side slopes of 1½ to 1. The outer face of breakwater is 17½ feet high sunk in 7½ feet of water at low level.

In April, 1897, the embankment was considerably damaged by ice. It was repaired in July following, including the refilling with stone of the ballast chambers along outer face of headblock. Total cost, $711.79.

During April and May, 1903, the flooring of part of the headblock and approach was renewed. Some repairs were also made to the front sheathing and to the stone embankment, at a total cost of $580.67.

In 1903-4 minor repairs cost $15.19.

In the spring of 1905, the headblock was slightly damaged by ice. Repairs were made in August and September following at a cost of $339.83.

On February 7 last, repairs to the flooring, not done the preceding year, were begun and about one-half completed on March 31.

POINTE À ELIE.

Pointe à Elie is the extreme southeasterly point of Albright island, two miles east of the House Harbour Catholic church. The steamer *Amelia* calls at Pointe à Elie for mails and freight, and for shelter during the northeasterly gales.

The construction of a landing pier and a breakwater will give here the best of shelter for all storms, and especially from easterly gales that prevail in the spring.

During the fiscal year 1902-3, a length of 115 feet by 22½ feet wide of the pier proper was built; 850 feet of roadway, 25 to 50 feet wide, and of an average height of 9 feet, was also built of stone with a timber facing held in place by walings, posts and cross-ties.

During the fiscal year 1903-4, 195 feet by 24½ wide was built.

During the fiscal year 1904-5, a crib of 100 feet long by 26 feet wide was built up to 18 inches above low water level and secured into position.

During the winter, 1904-5, the last crib built up to 18 inches above low water mark suffered greatly through ice and heavy storms, the top timbers were carried away and a large part of the stone ballast thrown out. The services of a diver were required for a full month, to gather the stone ballast around the pier and help in the reconstruction of the part of the pier under low water mark.

During the last fiscal year the 100-foot crib commenced, was placed into position and completed and a new crib 100 feet was built ashore and the roadway widened in places by blasting and removing solid rock.

Spring tides rise 4 feet; neap tides, 2 feet.

The expenditure during the last fiscal year was $7,031.10.

POINTE AUX ESQUIMAUX.

Pointe aux Esquimaux, in the united counties of Chicoutimi and Saguenay, is situated on the northern shore of the St. Lawrence, 525 miles below Quebec. Pointe aux Esquimaux is the chef-lieu of the north shore and most important trading post of that region for the traffic of fur, fish and oil.

The wharf purchased by the government in 1895 had a length of 125 feet and a width of 30 feet.

In 1895-6, it was lengthened 60 feet by the construction of a block, 30 by 30 feet and 32 feet in height, connected with the old work by a platform 30 feet in length. Amount expended, $4,028.43.

During the year 1902-3, a block, 30 by 30 feet and 50 feet high, in 41 feet of water, was built 15 feet from the outer end of the wharf and connected thereto by stringers, 10 by 12 inches, and 3-inch tamarack deals. Expenditure, $1,633.78.

During the fiscal year 1903-4, a crib, 30 by 30 feet, was built and sunk alongside of the work built in 1903. As the new work is expected to settle to a certain extent, its top was only finished in a temporary manner. Expenditure, $5,099.93.

During the year 1904-5, the pier was completed and superstructure of the pier built in 1902-3 was raised and completed. The wharf is now 213 feet by a width of 30 and 40 feet, with one outer block, 30 feet in length, 68 feet in width and 50 feet in height, and there is a depth of 40 feet of water at low water spring tides. The shed, which was an obstruction on the wharf, was removed to the side and repaired. Expenditure, $1,717.30.

During the fiscal year 1906-7, a portion of the shed, after being removed, was planked with 3-inch spruce and the flooring repaired. Expenditure, $572.07.

POINTE VALOIS.

Pointe à Valois, county of Vaudreuil, is situated on the south shore of Lake of Two Mountains, four and a half miles west of the village of Vaudreuil, and two and a half miles east of Como.

In 1889-90, the old pier at this place, measuring about 80 feet by 16 feet with the headblock of 45 feet by 20 feet and right of way thereto, was purchased from Chs. Valois for the sum of $690.

During the fiscal years 1890-1-2, the original pier was extended by adding, at the outer end, a block of ballasted cribwork, 135 feet long by 21 feet wide, with a return

to the eastward 55 feet by 25 feet; the total length of the work from the shore being thus increased to 235 feet. The depth of water available at the outer end of the wharf is now 6½ feet at low water.

During the fiscal year 1896-7, a sum of $210.72 was applied in effecting general repairs on this wharf.

In 1899, general repairs were made for a sum of $104.97.

During the fiscal year 1900-1, more extensive repairs were made at a cost of $805.60.

During the spring of 1905, the headblock and stone approach were slightly damaged by ice and repaired at a cost of $204.71.

In May and June, 1906, considerable improvements were made to the approach; the 20-foot span connecting said approach raised 1 foot and topped with a layer of gravel and small broken stone; a substantial guard-railing composed of 8-inch cedar posts every 10 feet and 1½-inch iron pipes, completed the repairs at a total cost of $600.

During last autumn, the whole headblock was razed to low water level and entirely rebuilt at a cost of $964.95.

PORTNEUF.

Portneuf is a village, in Saguenay county, situated on the north shore of the St. Lawrence, about fifty miles below Tadousac.

During the session of parliament 1903-4, an amount of $1,000 was voted for the construction of a wharf in the bay.

Work was commenced, and a pier, 40 by 20, was sunk in 7 feet of water.

When completed, the work will consist in a wharf of 160 feet in length, built in two piers and an abutment.

The outside pier will be an 'L,' 40 feet in length by 20 feet and 60 feet in width; the outer pier will be 20 by 20, the abutment, 40 by 20, with a space of 25 feet between the abutment and each pier. Amount expended $1,000.14.

During the year 1905-6, the work done was the continuation of the wharf; the abutment, 40 by 20, two piers, 20 by 20, and a portion of the outside pier were built.

The work is of round logs, corbels and stringers 12 by 12, surrounded with fenders; a portion of the planking is done with 3-inch spruce deals. Expenditure $3,999.84.

During the fiscal year 1906-7, the wharf was completed, except a very small portion of the sheathing.

Amount of expenditure, $2,983.44.

QUEBEC HARBOUR.

In order to afford more accommodation for large ocean steamers to land immigrants and general freight in the harbour of Quebec, the department decided, in 1902, to build an extension in a northerly direction, to the breakwater built many years ago on the river front of this harbour. The total length of the extension is 1,460 feet, which, with the 800 feet of the old work, will form four berths for the largest steamers; a return of 200 feet is also to be built at the lower end of the work.

The work consists of timber cribwork, 46 feet 6 inches wide at the base, 21 feet wide at the top, filled with stone ballast, and built to a height of 3 feet above low water spring tides, the cribs are founded on a bed of rubble stone 4 feet in thickness deposited on the sand bottom previously dredged to a depth of 46 feet at low water spring tides, leaving an available depth of 42 feet at the outer face of the cribs.

From the level of 3 feet above low water spring tides, the superstructure, 21 feet in height, is built of concrete, 16 feet wide at the base, 4 feet wide at top and stands 6 feet above high water spring tides; the back of the cribs and concrete superstructure is filled with earth for a width of 150 feet from the outer face of the concrete superstructure, forming an embankment which will increase the available top area by over 300,000 superficial feet.

The work is being carried on under four different contracts with E. Dussault & Co., of Levis, Que., for the total sum of $770,389.75. The first contract was signed on May 8, 1903, and the last on March 30, 1906; work was commenced in May, 1903.

At the end of fiscal year ending June 30, 1906, the work had been completed over a length of 960 feet, including the back earth filling and the amount then expended was $434,221.87

During the fiscal year, 1906-7, the crib seats were dredged out, the rubble stone deposited and the cribs were sunk over a length of 500 feet, the last crib also included 82 feet of the 200 feet return work, all the cribs were fully ballasted and the back filling brought up to the level of the top of the cribs, being a height of 45 feet from bottom.

The new work is now partly utilized for landing passengers and freight, by the Empress steamers of Canadian Pacific Steamship Company.

The amount expended on this work, including dredging, during the fiscal year ending March 31, 1907, was $151,404.97.

The total amount expended since the beginning of the work is $578,239.22.

REPENTIGNY.

Repentigny is a post village in L'Assomption county, on the St. Lawrence, two miles from St. Paul l'Ermite, on the Great Northern, and seventeen miles northeast of Montreal.

In August, 1904, a contract was entered into with Lachance Brothers, of Ottawa, for the construction of a wharf, opposite the Juneau property, about ⅛ mile from the village, for the sum of $10,975. It called for the building:—

1. Of a close-faced crib headblock, 73 feet 6 inches long by 40 feet wide, standing 19 feet high in 7 feet 3 inches of water;

2. Of a close-faced crib approach, adjoining headblock, of a length of 230 feet and a width of 16 feet;

3. Of a stone approach, 435 feet long and 18 feet wide at top, with slopes of 1 in 1 on both sides, the whole forming a length of 705 feet.

In order to place the proposed wharf the nearest possible to the centre of the village, a change of site was decided and that opposite the Telesphore Thouin property chosen, thereby lengthening the stone approach from 435 feet to 748 feet, and the whole structure from 705 to 1,018 feet, but without modifying in any way its other dimensions. A further arrangement was made in December with the contractors, whereby they agreed to the change at an extra of $5,039 above original contract price.

A right of way, 620 feet and 50 feet wide, was bought from Mr. Thouin at a cost of $100.

Work was begun early in January, 1905, and suspended on account of high water at the end of March of the same year. The stone approach was then two-third completed and the cribwork approach built to a mean height of 6 feet and fully ballasted. Expenditure during 1904-5 was $6,498.95.

Construction was renewed in September following. At the end of June, 1906, the crib headblock and crib approach were completed, except the last two tiers and the flooring. Some 60 toises of stone and riprapping on both sides would complete the stone approach. Expenditure during 1905-6, $5,530.50.

At the end of fiscal year 1906-7, about ninety-two per cent of the work had been done.

Expenditure during last fiscal year, $5,079.

RIMOUSKI.

The town of Rimouski, in the county of the same name, is situated on the south shore of the St. Lawrence, 180 miles below Quebec, its population is about 3,500

inhabitants. It is an important station of the Intercolonial railway. It is also the place where the royal mails are transferred from steamers to the railway.

Spring tides rise 15 feet; neaps, 9 feet.

The widening, repairing and other works of improvement, undertaken at the Rimouski wharf, in May, 1904, and carried through the year 1906, were continued during the nine months ended March 31, 1907. The main body of the wharf was widened on a further length of 132 feet, by the addition of two cribs, 66 by 20 by 32; these cribs were completed and sheathed with elm 6 inches. The wharf is now 40 feet wide upon a length of 958 feet from the inner end.

On the new part of the wharf, the top planking was laid on a surface of 9,125 square feet, with spruce deals 3 inches thick. The planking, stringers course of ties have been renewed on a length of 425 feet, on the old part of the wharf.

A surface of 4,640 square feet, upon the head of the wharf, was raised 5 feet; all cross-ties, stringers and planking being renewed. Seventy-five pine sheet piles, 40 feet long, and 10 by 10 inches, were placed along the outer face of the head of the wharf and sunk 15 feet into the bottom.

Elm sheet piles 6 inches thick have also been placed along the eastern face of the wharf, on the length of 140 feet and driven 8 feet through the bottom, and 22 mooring posts were renewed.

Minor repairs and dredging were also performed. These works have been done by day labour at the cost of $38,474.11.

RIMOUSKI RIVER.

The Rimouski river empties into the St. Lawrence, at about three-quarter miles from the church of the town of Rimouski.

A very large quantity of logs are driven down the river every spring.

The firm of Price & Co. operate an extensive saw-mill at the place and also a pulp mill, which is built a few miles up the river.

Both the lumber and the pulp are loaded in steamers through lighters.

Wharfs are built at the mouth of the river, but a considerable amount of tide is necessary to allow boats to draw near. During the months of July, August and September, work was done to improve the channel. Much blasting has been performed and a large quantity of boulders and other scattered rocks were broken and removed.

During the period of extreme low water, hand dredging was done to lower the shoals and to widen the entrance.

RIVIÈRE Â LA PIPE (OR ST. HENRI DE TAILLON).

Rivière à la Pipe is a small village situated on the north shore of Lake St. John, at the mouth of the river of the same name, seven miles north of Grande Décharge.

The wharf is situated at a point of lot No. 118, township Taillon, about one mile westward of Rivière à la Pipe. It is built in a southerly direction, for a length of 214 feet and a width of 25 feet, and extends to 4 feet depth of water at ordinary low water.

It was built of close-faced cribwork up to 18 feet, during the year 1897-8, and will stand 25 feet high, when completed.

The Quebec government has built a good road from the public road to the present wharf, a distance of two miles.

During the year 1899, an addition, 50 feet long, 30 feet wide, was built at the outer end of the wharf, to facilitate the approach.

During the year 1900, the outer block was raised 5 feet, sheathed for a length of 120 feet and replanked; 35 toises of stone were also placed in the work, at the cost of $999.68.

During the year 1904-5, a certain quantity of timber was bought, in view of the extension of the wharf. Cost, $962.40.

The outside pier, which is 30 by 50 feet, was unloaded. Amount expended, $332.02.

During the year 1905-6, the pier, 30 by 50 feet, was removed and placed at a distance of 219 feet from the old wharf, to form the outer end.

Two cribs, 20 by 25, were built open-faced, at 30 feet from the old work and 25 feet apart. Amount expended, $3,684.69.

During the fiscal year 1906-7, one of the two piers, having been moved by ice, had to be partly rebuilt; a damaged portion of the wharf near shore end, 30 feet in length, was also repaired.

A third pier was built and the superstructure over the two first was constructed; corbels and stringers, 12 by 12, were laid, and planking was made of 3-inch spruce deals.

The three piers, the shore end and the pier removed last year were fully ballasted with stone.

A certain quantity of timber and stone is on hand to continue the work. Amount expended during the year, $2,981.06.

RIVIÈRE AU RENARD.

Rivière au Renard is one of the most ancient settlements in the county of Gaspé. It is the first important fishing station and business place met with proceeding from Gaspé Basin along the south shore up the St. Lawrence. The population is estimated at 1,700.

A small landing pier was constructed in 1895-6. In 1899-1900 the sum of $870.51 was expended for materials, such as timber, iron, plant, tools, freight, &c., towards the construction of a landing pier and breakwater.

During the fiscal year 1900-1, the sum of $2,013.36 was expended in purchasing additional timber. Work was started in May, and on June 30, 190 feet of close-faced cribwork 5½ feet high, 28 feet wide at bottom and fully ballasted, was in place.

On June 2, 1903, a contract was entered into for the building of an additional length of 600 feet. The work was completed during the last fiscal year.

Expenditure in 1906-7, $5,423.50.

RIVIÈRE BLANCHE.

The village of Rivière Blanche or St. Ulric de Matane, county of Rimouski, is on the south shore of the St. Lawrance, twenty-one miles east of Métis and nine miles west of Matane.

Spring tides rise 14 feet; neaps, 8 feet.

During the fiscal year ended March 31, 1907, the wharf was sheathed with hardwood planks 6 inches thick, upon a length of 53 feet by a height of 10 feet on the northerly side; 44 by 19·6 feet on the south side, and 27 by 19 by 19 feet on the east side.

The top planking on the head of the wharf was renewed, on a surface of 3,700 square feet, with 3 inches thick spruce deals.

A middle pathway, 7 feet wide, has been placed upon a length of 460 feet. Two hundred and forty-four feet of cappings were renewed and three ladders have been placed where needed.

Total expenditure in 1906-7, $1,499.97.

RIVIÈRE DES QUINZE.

This river flows into the northeast extremity of Lake Timiskaming, just east of the Ontario boundary. There are several timber cribs for the purpose of booming the logs before entering the lake. One of the channel piers was burnt and its stone filling became a menace to navigation.

On October 31, 1906, that stone was removed to an adjacent pier, by the snag-plant, which also removed, the next day, four snags obstructing the channel. This work was done under the Blanche river appropriation, at a cost of some $50, when plant was being moved into winter quarters, at the foot of the lake.

RIVIÈRE DU LIÈVRE LOCK.

This lock is situated at Poupore, on Rivière du Lièvre, twelve miles above Buckingham, in the county of Labelle. It was built to overcome the little rapids at that place and to drown the long rapids, seven miles farther up the river, thus giving a continuous stretch of navigation as far as High Falls, a total distance of nineteen and a half miles; this waterway is indispensable to the settlers of the upper part of the Lièvre, who have no railway accommodation and only a poor highway, opened some few years ago.

Various amounts aggregating $10,053.68 were expended from 1881 to 1887 in improving the river, through both rapids to High Falls. Navigation still remaining unsatisfactory, it was decided to build a lock and dam. Construction started in 1887, and was completed on April 19, 1892, when the first boat was locked through. The cost of the construction amounted to $233,658.65. Owing to the flooding of land caused by the construction of the dam, amounts aggregating $4,752.74 were paid as damages. (For further particulars of construction, see report for fiscal year 1899-1900.)

During the year 1893-4, the sum of $1,244.94 was expended in removing boulders obstructing the channel through Long Rapids. In the autumn of 1903, this channel was further improved by removing thirty-five boulders, varying in size from 10 to 90 cubic feet, at a cost of $880.

In the month of April, 1900, a landslide from the east bank of the river, one and a half miles below the lock, deposited some three acres of land and vegetation. The waterway was completely obstructed for a short time, until a new channel was scoured out in the west bank of the river, but not of sufficient depth for the steamers plying these waters. A channel, 60 feet wide and 6 feet deep was made by digging out the earth, and trees, at a cost of $2,259.05.

On October 11, 1903, an extensive landslide destroyed about 100 acres of land under cultivation, farm houses, outbuildings &c., on the west bank of the Lièvre, just below the lock and dam. The immediate effect of this cataclysm was to completely choke the river for several hours, backing the water until the increased head caused the scouring of channels, through the clay which filled the river bed on a distance of one mile below the dam. Upstream, the energy of the flowing clay was expended in destroying the superstructure of the dam and jamming the lock gates, filling with debris the lock chamber and river bed to a point 700 feet above the dam.

A portage road, one and half miles long (including one half mile of public highway) and freight sheds above and below the obstructed channel, were built in the autumn of 1903, and the congested traffic was controlled by establishing regular portaging, at a cost of $3,641.66. This service considerably raised the average cost of maintenance through the navigation seasons of 1904-5-6. The dam, log slide, retaining walls, training dikes, boom piers and booms have since been replaced or reconstructed at a cost of $63,732.06. The total cost of maintenance to March 31, 1907, since formal opening of lock in 1892, amounts to $28,999.27 and the cost of ordinary repairs and improvements to March 31, 1907, was $13,079.76. (For further particulars of reconstruction on account of landslide, see report for fiscal year 1905-6.)

A dredge was built in 1896, at a cost of $21,599.98, also two dump scows, a coal scow and a wood scow, costing respectively $3,900, $3,623.23 and $1,150. In the autumn of 1906, this plant improved navigation over a distance of some 3,000 feet through the clay deposit, resulting from the landslide of 1903, at a cost of $3,029.56.

Expenditures summarized:	1906-7	To Date
Removing obstructions	.....	$ 14,437 67
Construction, lock and dam	.....	233,658 65
Claims for damages	.....	4,752 74
Repairs and improvements	$ 565 10	13,079 76
Maintenance	4,455 49	28,999 27
Reconstruction, dam, piers &c	.....	63,732 06
New dredging plant	5,002 86	30,273 20
Dredging	3,029 56	3,029 56
Total expenditures	$13,053 01	$391,962 91

RIVIÈRE DU LOUP.

Rivière du Loup, or the town of Fraserville, is chef-lieu of the county of Témiscouata. It is situated on the south shore of the St. Lawrence, 114 miles below Quebec. It is a thriving little town of over 4,000 inhabitants, which contains several manufactories, including two pulp mills.

The Rivière du Loup point, where the wharf is located, is distant two and a half miles from the village. It is one of the best known and most frequented summer resorts of the St. Lawrence.

Spring tides rise 19 feet; neaps, 12 feet.

Owing to the action of the ice and waves, and the considerable wear and tear due to the heavy lumber traffic, annual repairs are required on that wharf.

During the nine months of the fiscal year ended March 31, 1907, the following works were performed:—

The trestle work, supporting the railway track on the wharf, being considered unsafe to carry the weights of trains, was demolished on a length of 775 feet, and rebuilt with pitch pine 12 by 12 inches; the mean weight of the trestle being 3 feet, a new planking was laid on the top of it.

Eighty spruce fenders, 10 by 8 inches and 25 feet long, were placed along the eastern face of the wharf.

A surface of 8,750 square feet of the face timbers has been sheathed with spruce 5 inches thick, and 3,500 square feet sheathed with black birch 6 inches in thickness; the hardwood sheathing of the outer face was also repaired.

At the shore end, on the north side, the face timbers have been renewed with cedar, on a length of 70 feet and a height of 5 feet. The stairway, on the east side, near the outer end, was entirely renewed, and the slip, on the inner side of the head of the wharf, has also been repaired.

Lastly, the pavement on a surface of 2,500 square feet was renewed.

The work was done by day labour at a cost of $3,741.04.

RIVIÈRE GODFROYE.

Rivière Godfroye is a small river in Nicolet county, rising in the seigniory of Roque Taillade and flowing into the St. Lawrence through the parish of St. Grégoire, opposite Three Rivers.

On June 11, 1906, a contract was entered into with Mr. John O'Shaughnessy, of Nicolet, for the construction of a landing pier, at the entrance of the river, the contract price being $4,200. It called for the construction of:—

(*a*) A pile headblock, 32 feet 3 inches wide, formed of two portions, one measuring 60 feet 6 inches also on the outside face, the two making an angle of 125 degrees.

(*b*) A stone approach, 611 feet long, 16 feet wide clear at top with slopes on both sides, said approach making an angle of 25 degrees with the longer face of headblock.

The whole structure standing 11 feet 3 inches above low water level.

Work was begun in July and completed August 18 following.

A small extra of $75 was allowed the contractor for the construction of a small low water stone slip on the upstream extremity of wharf and approach. Total expenditure, $4,410.

RIVIÈRE JESUS, AT ST. EUSTACHE.

St. Eustache is an incorporated village in Two Mountains county, on the Canadian Pacific Railway and on Rivière Jesus, some seven miles southwest of Ste. Thérèse, or twelve miles west of Montreal.

The channel between St. Eustache and Ste. Rose, some seven miles downstream, being partly obstructed by boulders, these were removed in September last and a few beacons, about ten, were placed at different places, as an aid to navigation. Expenditure, $8,321.11.

RIVER NICOLET.

River Nicolet rises in Lake Nicolet, Wolfe county, and falls into Lake St. Peter three miles below Nicolet, in Nicolet county. Length, sixty miles. It is a rapid stream, but navigable to some distance above the town.

In order to protect the schooners loading in the harbour from the force of storms on Lake St. Peter, a jetty was commenced in 1881 and added to every successive year. It was originally 3,500 feet long, made of two rows of close piles, 13 feet distant, and filled with stone. It stood four feet above low water with an average height of 5½ feet.

In 1891, some piling was done, making jetty 3,762 feet long.

Dredging in the river and repairs to the jetty were done yearly at a cost as follows:—

Year 1882 to June 30, 1900, construction, repairs and dredging	$148,780 54
" 1900-1, dredging and repairs	7,489 19
" 1901-2, dredging and repairs	4,795 88
" 1902-3, dredging	3,999 27
" 1903-4, dredging	11,723 81
" 1904-5, construction, repairs, dredging	10,320 53
" 1905-6, repairs and dredging	9,483 40
" 1906-7, repairs and exclusive of dredging	5,002 75
Total to March, 31, 1907	$201,595 37

Out of the expenditure 1904-5, a small wharf was built during February and March, along the river about 1½ miles from Nicolet and opposite the old Ball mills. It was made of close-faced stone filled crib block, 80 feet long, including ice breaker, inclined 1½ in 1 and 31 feet wide. A right of way to above wharf, 250 feet long and 80 feet wide, was purchased from Mr. C. Proulx, at a cost of $400. Total cost of wharf and right of way, $3,303.06.

In 1905-6, the repairs to jetty were made in June, July and August, 1905, and June, 1906. For a length of 1,800, the jetty was raised, with stone, 2 feet on its whole width of 13 feet and for another 1,800 feet, it was protected on upstream side by a stone icebreaker, inclined 2 in 1 with an 8-foot base. Some further protection filling was done at the outside end for a length of about 100 feet.

From August to the end of October last, some 3,000 cubic yards of stone were placed all along the jetty. Done by day labour.

Expenditure in 1906-7, $6,330.65.

RIVIÈRE OUELLE.

The pier is situated at Pointe aux Orignaux, five miles distant from the village of Rivière Ouelle, in the county of Kamouraska, on the south shore of the St. Lawrence, opposite Murray Bay, on the north shore.

A branch of the Intercolonial railway built from Rivière Ouelle station to the outer end of the wharf, bears trains connecting with a steamer which crosses the St. Lawrence, several times a day during the summer season, calling at Murray Bay and other places on the north shore. In winter the service is also daily.

Spring tides rise 20 feet; neaps, 12 feet.

During the fiscal year the work done by day labour consisted in renewing the hardwood sheathing: 31,438 feet, B.M., of black birch, 6 inches thick and 18,194 feet of tamarack, 3 inches in thickness were used to renew the sheathing on both sides of the wharf. Five ladders were placed where needed.

On January 5, 1906, a contract was awarded for the construction of a spur at the western end of the head of the pier; the work was carried out and nearly completed during the nine months of the fiscal year ended March 31, 1907.

The crib is 50 feet long, 33 feet wide and 41 feet high ; it is built of round timbers, 13 inches in diameter at the small end ; from the level of 3 feet below low water spring tides, the sides and outer end are sheathed with concrete 18 inches in thickness, moulded with a batter of $1\frac{1}{4}$ in 12.

The work is intended to afford protection against ice for the ferry boat when standing at the outer end. The contract price is $7,745.

The total expenditure for the fiscal year was $10,356.87.

RIVER RICHELIEU, ICE PIERS (AT ST. JOHN'S).

St. John's, the chef lieu of the united counties of St. John's and Iberville, is situated on the Richelieu river, twenty-seven miles southeast of Montreal.

In order to give much needed assistance to boats passing through the swing span of the Vermont Central Railway bridge, a boom was constructed. It has a length of 350 feet by a width of 4 feet, and is moored to clusters of six piles each, driven 15 feet into the ground, every 50 feet, except the upstream cluster, which has ten piles and is protected against the ice by a steel plate, 6 feet by 6 feet, $\frac{1}{16}$-inch thick. The piles of each cluster are well secured together by bolts. The boom stands in 9 feet of water at extreme low water level, and in 14 feet at extreme high water level. The timber used is 12 by 12-inch hemlock for the booms, and round pine and oak, 14 inches at butt end, for the piles. The work was commenced in November, 1900, and completed in April, 1901, at a cost of $1,504.45.

In 1902-3 minor repairs cost $8.73.

During the spring of 1904, the head and two intermediate clusters of piles were broken by the ice, and the boom was also much damaged. A close-faced cribwork ice-breaker, 20 by 12 feet and 18 feet high was built in place of the head cluster of piles to moor the bottom; the two broken clusters of piles were renewed, the boom was repaired and sheathed diagonally with 3-inch pine deals. The work was carried out by day labour at a cost of $1,259.88.

In 1904-5 minor repairs to piles and boom cost $206.64.

In March last, the fourth ice pier was also entirely rebuilt in close-faced cribwork, properly ballasted with stone. The pier is 12 feet by 16 feet for a height of $10\frac{1}{2}$ feet from bottom, and 3 feet 9 inches by 12 feet at top, the upstream face being slanted $1\frac{1}{2}$ in 1, sheathed with 8-inch spruce and covered at corners with $\frac{3}{8}$-inch steel plates. Expenditure in 1906-7, $767.36.

RIVER ST. FRANCIS (AT RICHMOND).

Richmond, an incorporated town in Richmond county, is situated on the St. Francis river, it is a station on the Grand Trunk Railway, and is seventy-six miles from Montreal. It is connected with Melbourne, on the opposite side of the river by a municipal iron bridge.

During the spring freshets, almost every year, the town of Richmond is flooded to a height of 5 or 6 feet owing to ice-jams formed in the River St. Francis, at a

place called 'the Narrows.' In order to prevent the occurrence of the ice-jams and the consequent floods, which have caused considerable damages in past years, it was decided to build four ice-breakers, three above 'the Narrows' and one above and opposite the pier of the municipal bridge. In December, 1902, a contract was entered into with Mr. Ross, of Richmond, for the construction of the four ice-breakers, for the sum of $10,317. The work was commenced in February, 1903, and completed in December the same year.

Later, it was decided to build four additional ice-piers, 150 feet above a dam, in the St. Francis river, about ten acres upstream of the bridge. The object of those ice-piers is to retain the ice which runs over the dam during the winter and forms a large accumulation of ice a few hundred feet below the said dam, and contributes largely to the spring floods. To that effect an agreement was entered into with the contractor, September 28, 1903, for the construction of four additional ice-piers of closed-faced cribwork, 18 by 12 feet to a height of 2 feet above the level of the water, fully ballasted, for the sum of $4,000. The work was completed in December the same year.

In June, 1904, the slanting faces of the four ice-breakers were sheathed with $\frac{3}{16}$-inch steel plates, and the upstream corners of the four ice-piers above the dam, sheathed with $\frac{1}{4}$-inch steel plates at a cost of $628.91.

During March last, the three piers above the 'Narrows' were resheathed on northeast side with 3-inch pine planks and reinforced on the southwest side with some 260 cubic yards of stone. Nine $\frac{1}{8}$-inch steel plates to protect these piers were bought but could not be put in place on account of the high level of the water.

Expenditure, including dredging, in 1906-7, $11,154.88.

RIVER ST. LOUIS.

Improvements near St. Louis de Gonzague.

St. Louis de Gonzague is a post village in Beauharnois county, on the Grand Trunk Railway, ten miles from Beauharnois and thirty-five miles southwest of Montreal.

During the spring high water, the River St. Louis spreads over the farming lands from the canal feeder to the village of St. Louis de Gonzaque, a distance of about seven miles, and thus causes considerable damage. During the summer, the river often overflows after a heavy rain storm, and extensive fields of promising crops have been entirely lost.

Surveys of the river were made in November, 1903, and October, 1904. It was found that from the village of St. Louis de Gonzague to a distance of $2\frac{1}{2}$ miles upstream, several little rapids give a total fall of 6 feet. Above the canal feeder, the fall is about 1 foot per mile.

By proper deepening of the river bed and straigthening of certain curves, the waters should be lowered some 4 feet, which would amply be sufficient to protect the farmers along the banks.

To this effect, a small dredge was built during the winter of 1903-4 and placed in operation in October, 1904.

At the end of June, 1905, a cut had been made through a point known as Simmon's, a 28-foot long and 12-foot wide steel span composed of 4 fifteen-inch 42 pounds I beams with 8-inch channel conections, had been erected in order not to interfere with the roadway, and the necessary dynamiting and dredging through hard-pan and large boulders up to half way through the lower rapid about 1,000 feet from Simmon's mill. The total expenditure 1904-5, including dredge operating staff, but exclusive of cost of dredge, was $6,407.28.

During 1905-6, some 5,000 cubic yards of rock and hard-pan was blasted and removed in the making of a cut 700 feet long, 40 feet wide and of an average depth of 5 feet. General dredging including that of blasted materials was done for a length

of about 1,500 feet. Expenditure during year was $7,101.74. The dredging and blasting was continued in July last and suspended in October, to be resumed with next year's appropriation. Besides, the regulating gates of the canal feeder being found in a dangerous state of decay, work of reconstruction was begun in September and completed in the middle of October last. The new $\frac{5}{8}$-inch steel gates, 4 in number, 8½ feet high and 4 feet wide, rest on a skeleton of concrete mixed 1:3:5 and properly reinforced with 1½-inch iron bars embedded horizontally and vertically. The doors are lifted, sliding on copper grooves, by 2-inch iron screws turned by wheel handle. The top of gates used as a highway bridge, the flooring being concrete, 22 by 22 feet and from 18 to 24 inches thick. The retaining walls on both sides are 2 feet thick at bottom, 18 inches at top, with 45 degrees return wings and a handlaid stone backing. The whole structure rests on a 1 foot concrete platform 28 by 24 feet and stands, from under said platform to top of flooring, from 14 to 14½ feet high.

Expenditure for fiscal year 1906-7, $7,147.38

RIVIÈRE VERTE (GREEN RIVER).

Green river, which flows through the parish of Isle Verte, empties into the St. Lawrence, about $\frac{3}{4}$ of a mile west of Isle Verte church. During spring freshets, this river is liable to cause considerable damage by flooding the mills, scouring and disintegrating the land of the riparian properties.

In order to prevent further damage, or at least, to reduce it to the lowest possible amount, it was decided to improve the channel of the river, to facilitate the water-flow in the spring.

To that effect the following works were performed:—

A new channel, 800 feet long, 20 feet wide, was opened on the west side of the river; a dike 200 feet in length, 8 feet high, with widths of 16 feet in the base and 8 feet at the top, was built of open-faced cribwork, filled with stone, with a water-tight sheathing in front. These works were done during the months of November, 1903, and May and June, 1904.

The amount expended was $3,698.

The work was continued during the year 1904-5, a second cribwork dike was commenced on the east side of the river, and a length of 275 feet was constructed; it had widths of 10 and 20 feet at the top and bottom respectively and a mean height of 10 feet; the rear side was vertical and the front inclined 1 in 1.

The amount expended during that year was $5,499.61. A large quantity of timber, left on the site and paid for, was available for further works.

During the year 1905-6, the work was resumed and completed; the dike on the east side of the river was extended by the construction of a section 265 feet long; the whole length of this dike being now 520 feet. The main channel of the river was widened and deepened on a length of 800 feet.

The whole work was done by day labour.

The expenditure for that fiscal year was $5,800.49.

The cribwork dike built in 1904, on the west side of the river, having proved not high enough, it became expedient to raise it.

During the fiscal year of 1906-7, this dike which is 220 feet long, was raised 3 feet; its total height being now 13 feet. It is expected in its present state, to afford the protection and meet the requirements for which it has been designed.

Expenditure during last fiscal year, $999.75.

ROBERVAL.

The town of Roberval, in the county of Chicoutimi, is built on the east side of the River Ouitchouanish, near its mouth, on the south shore of Lake St. John and 200 miles east of Quebec. It is the northern terminus of the Roberval branch of the Quebec and Lake St. John Railway.

In 1892-3, the department purchased from Mr. H. G. B. Beemer, for the sum of $750, together with right of way to the public road, an isolated block of cribwork, 75 feet long by 30 feet, at the mouth of the river, 425 feet from the shore of the lake.

During 1892-3 and 1893-4, this block was connected with the shore by means of an approach, 425 feet long by 25 feet wide, at a cost of $5,469.06.

In 1894-5, a headblock, parallel with the shore, 50 feet by 30 and 30 feet in height, with a slip at the outer end, was added, and the entrance to the harbour was deepened and widened. The cost of this work was $4,200.41.

This pier, as completed in 1895, was 500 feet long and 25 feet wide generally, with the exception of the headblock, which measures 50 feet by 30, and has 8 feet of water along its face, at low water, and 19 feet, at high water, during the season of navigation.

During the year 1896-7, a combined freight and shelter shed, 45 by 24 feet, was erected on the headblock at an expense of $425.98.

In 1899, the wharf was destroyed by fire and rebuilt in 1900-1, for a length of 500 feet, a width of 30 feet and a height of 23 feet ; a waiting room, 15 by 18 feet, and a freight shed, 15 by 28 feet, were erected on the wharf. Amount expended, $9,747.82.

During the year 1902-3, the wharf was enlarged on the south side for a length of 60 feet by 15 feet in height; a trestle work was built of spruce timber with four stringers of 12 by 12, ready to receive the sleepers. Amount expended, $4,581.59.

During the year 1903-4, the greater portion of the trestle work, done the previous year, was planked with 3-inch plank; stringers were laid, resting on a cap piece of 12 by 12. The stringers are 10 by 10 inches and covered with planking of 3-inch deals. Amount expended was $625.55.

During the year 1905-6, the planking of the trestle work commenced in 1903-4 was completed. Amount expended, $1,002.81.

During the fiscal year 1906-7, the planking and the sheathing of the wharf were repaired. Amount expended, $16.88.

During the year, the Quebec and Lake St. John Railway Company have built a track from the wharf to the main line.

SABREVOIS.

Sabrevois is a post village in Iberville county, on the Richelieu river, seven miles south of Iberville.

In order to better accommodate the traffic by waterway to and from this place, an old wharf together with a 30-foot right of way from the public road to the river, a distance of 1,372 feet, was purchased in 1899 from Mr. Wm. Ryan, for the sum of $500. A new structure was immediately begun in February, 1900, by day labour, and completed in November following, at a cost of $6,573. The wharf consists of:—

(*a*) Stone embankment, 200 feet long and 20 feet wide, with slopes of 1 in 1 on both sides.

(*b*) A trestle approach 120 feet long and 24 feet wide.

(*c*) A pile headblock 108 feet long and 30 feet wide, with a cribwork ice-breaker at upstream end.

In June, 1902, the sum of $988.07 was expended in raising, improving and fencing the roadway.

During the early spring of 1903, the roadway was under water for several days and greatly damaged. From March to June, 1904, the road was raised with stone and gravel 2 to 3 feet for a distance of 500 feet from the wharf and 15 feet at top. Expenditure, $693.14.

In August last, the flooring of the headblock, being in a dangerous state of decay, was partly renewed at a cost of $104.51.

ST. ALEXIS.

St. Alexis, on the south shore of Ha! Ha! bay, River Saguenay, is about sixty-three miles from its mouth.

In order to accommodate the increasing trade of the locality and afford landing facilities at this place for the steamers frequenting the Saguenay, the sum of $4,000 was appropriated, at the session of parliament of 1898, for the construction of an isolated block.

The block is 50 feet long by 25 feet wide and 27 feet high; the outer end is a distance of 1,446 feet from the high water mark of spring tides.

In 1899-1900, two blocks, one 80 feet and the other 68 feet in length, were built from shore in view of connecting the outer block. These blocks are 25 feet wide and 20 feet high at the outer end. Expenditure, $3,999.

In 1900-1, an addition of 250 feet long and 25 feet wide was built, at the cost of $4,016.63.

During the year 1901-2, an extension to the shore wharf, 150 feet in length, 25 feet wide, was constructed at 25 feet south of the work commenced in 1898. They are placed from each other at a distance of 25 feet and are 21, 22, 23 feet in height respectively.

Expenditure, $4,000.01.

During the year 1902-3, an extension to the shore wharf, 150 feet in length, 25 feet wide and 21 feet high, at the outer end, was built. Expenditure, $3,994.71.

During the year 1903-4, five piers, located 25 feet apart, were built. The first one from the old work is 20 by 35 feet with a landing slip; the other four are 20 by 25 feet. A portion of the wharf built last year was completed with stringers and flooring; the span and the top of the first pier were also completed; the stringers are 10 by 12. The four other piers are ready to receive the corbels and stringers. Expenditure, $4,082.35.

On January 4, 1905, a contract for the completion of the wharf was awarded. The work was commenced immediately, and 12 piers were sunk, 9 of 20 by 25, and 2 of 25 by 30. Expenditure, $5,276.65.

During the year 1905-6, the work under contract was completed. Expenditure, $12,313.85.

During the fiscal year 1906-7, certain repairs were done, planking and sheathing renewed. Expenditure, $22.89.

ST. ANICET.

St. Anicet is a post village in Huntingdon county, ten and a half miles from White Station on the Grand Trunk Railway (Montreal and Champlain division) and 56 miles southwest of Montreal, on the south shore of Lake St. Francis.

This pier was built in 1862, at a cost of $1,920, and stands 5 feet 3 inches above low water. It is 300 feet in length, the width of the 200 feet nearest to the shore or approach is 13 feet, and the other 100 feet, or outer block, 35 feet.

The shore abutment consists of a solid crib, 47 feet long, and the remaining 153 feet of the approach is supported on four cribs, 12 by 13 feet long, united by timber spans of stringers and planking. In 1889-90, some slight repairs were made amounting to $48.67.

In 1890-1, the entire approcah, 200 feet long, was rebuilt from the water line at a cost of $635.10.

In 1892-3, small repairs were made, amounting to $25.88.

In 1893-4, the outer block, 100 feet by 35, which is a solid cribwork, was rebuilt from the low water line, at a cost of $1,500. A shed, for the accommodation of passengers and freight, was also built on the wharf the same year, at a cost of $225.35.

In 1897-8, the sum of $2,197.95 was expended for the addition of a wing or return, 60 feet long by 30 feet wide at the outer end and 40 feet wide at the inner end, on the

upstream side of the wharf, the object being to enable vessels to lie at the front of the wharf instead of along its sides, where it is very difficult to land during rough weather caused by westerly wind. This addition was built of close-faced cribwork, but was not completed at the end of the fiscal year.

During the fiscal year 1898-9, the sum of $1,423.75 was expended to complete the construction of the above-mentioned addition and to make general repairs to the old wharf. The work was done by day labour.

During June and July last, the whole flooring of headblock and approach was renewed with 3-inch pine deals, the four piers of approach and abutment were rebuilt from low-water level, the timber spans renewed and the store-house enlarged and repaired.

Expenditure in 1906-7, $931.85.

ST. ANDRÉ.

The village of St. André, or Andréville, is situated on the south shore of the St. Lawrence, in the county of Kamouraska, about fifteen miles west of Rivière du Loup and 100 miles below Quebec.

The place is distant five miles from the Intercolonial Railway, and the traffic is chiefly done by navigation; it is somewhat frequented as a summer resort.

Spring tides rise 19 feet; neaps, 12 feet.

The public wharf consists of an earthen embankment, 850 feet long, with a mean height of 7 feet, and nine piers connected by platforms of 30 foot spans.

During the year 1902-3, the earth approach to the wharf was repaired and greatly improved. In 1904, an addition to the wharf was built; it was 80 feet long, 26 feet wide on a height of 18 feet.

During the year 1905-6, a further extension of 100 feet in length was constructed, the width being 30 feet, and the height 20 feet. A slip, 45 feet long, was built near the inner end of the wharf. The planking and stringers were renewed on a length of 332 feet and a width of 24 feet; 664 feet of capping were also replaced.

In the course of the fiscal year ended March 31, 1907, the repairs to the planking begun the year before, were continued and completed; 1,182 feet of spruce, 10 inches square, and 15,139 feet, B.M. of spruce deals 3 inches.

A certain quantity of gravel was also put on the earth approach to the wharf and 500 feet long of capping were replaced.

The expenditure for the last fiscal year amounted to $1,196.28.

STE. ANNE DES MONTS.

The Ste. Anne river flows into the St. Lawrence at the west end of the village of Ste. Anne des Monts, one of the oldest and most important establishments of the Gaspé peninsula, some 100 miles below the nearest railway station, Little Métis.

In the fiscal year 1904-5, timber was bought to the amount of $1,570.86, towards improving the entrance to the river.

During the month of June 1906, additional material was purchased and preparations were made towards carrying out the proposed improvements.

In July and August, the work was delayed on account of the refusal of the parties who own the timber limits to allow the cutting of timber for the face work. The outside crib, 50 by 22 feet at top with a batter of 1 in 8, was built to coping, 5 feet of water, at low water. Three mattresses were laid, but the superstructure could not be built, on account of not having the timber for facing.

In the river, the eastern protection work had been built for a length of 200 feet, when a very heavy freshet swept 300 feet of the sand bar, westward of our protection work, which was in no way disturbed though not completed at the time. The freshet carried away over 350 logs that had just been prepared with the permission of the new owner of the timber limits. Up to the present, some 50 of those logs have been reco-

vered. Some temporary proteetion work had to be done last fall to proteet the bank. east of the permanent work.

The total expenditure during last fiscal year amounted to $4,999.76.

STE. ANNE DE SOREL.

Ste. Anne de Sorel, in the county of Richelieu, is situated at the head of Lake St. Peter, on the south shore of the St. Lawrence, two miles below the town of Sorel.

In 1890, the necessary materials, costing $2,497.11, for the eonstruction of an iee-breaker, 60 by 25 feet at bottom and 56 by 24 feet at top and standing 12 feet high in 7 feet of water, were bought. The structure was completed the year following, at a eost of $1,696.25. It is situated opposite the parish church.

At the beginning of October, 1898, the above pier was conneeted with shore by a erib, 100 feet long, 18 feet wide at bottom and 14 feet wide at top, with iee-breaker all along, its height varying from 7 to 2 feet. Ten-inch square and round hemlock, six-inch sheathing on ice-breaker and three-inch pine flooring were used, and the erib entirely filled with stone. Completed November 3 following at a eost of $1,596.87.

In March last, materials were bought, including stone and timber, to repair part of the sheathing, the flooring, capping, and to protect upstream side of wharf. On account of the high level of the water, work had to be postponed. Expenditure, $2,590.55.

ST. ANNE DU SAGUENAY.

Ste. Anne du Saguenay, Chicoutimi county, is situated on the north shore of the Saguenay, seventy-two and a half miles above Tadousac, and opposite the town of Chicoutimi.

Spring tides rise 17 feet; neaps, 9 feet.

As early as 1878 the Dominion government was urged to construct a landing pier for the accommodation of the inhabitants of the distriet. The request was not, however, considered until 1888, when a portion of the timber for the proposed structure was purchased, at a cost of $2,100.

In 1889, the pier was commenced from shore outward, and, at the close of the year 1888-9, a portion, 77 feet long and 30 feet wide, on its lower or eastern face, had been completed, at a cost of $2,109.60. It was built of close-faced cribwork filled with stone ballast. In 1890, this shore block was extended 87 feet on a width of 27 feet, at a cost of $2,045.50, and, in 1891, a further length of 50 feet of similar work was built, at an additional cost of $2,498.96.

In 1892, a headblock, 30 feet long, 60 feet wide and 20 feet high, was built at a distance of 250 feet from the end of the work, completed the previous year, at a cost of $2,262.11. In 1896, this block was raised 8½ feet and put on the same level as that of the work built out from shore, viz., 6 feet above ordinary high water spring tides.

With a view of completing the pier to shore, a sum of $5,575.25 was expended in 1897 for the construction of two cribs, each 87½ feet long and 25 feet wide, placed 25 feet apart and 25 feet from both the head and shore blocks.

During the year 1898, the three 25 foot openings left in the work were spanned, the flooring was laid and the structure completed to shore, at a cost of $746.70.

During the year 1899, the planking of the pier was renewed over a length of 250 feet, the sides of the cribs were sheathed on a length of 250 feet and fenders were placed at the angles. The work was done by day labour, at a eost of $1,099.81.

During the year 1900, the outer block, for 110 feet, was sheathed with tamarack, at a cost of $1,499.99.

During the year 1901, the sum of $2,507.30 was expended in renewing the planking of the wharf over a length of 240 feet and a width of 25 feet. The upper side of the wharf was sheathed over a length of 110, with 6-inch tamarack, and a shed, 45 feet by 30 feet, was erected on the wharf.

During the year 1901-2, a crib, 40 feet wide and 27 feet high, was constructed at the eastern extremity of the wharf. It is fully sheathed with 5-inch tamarack. The flooring of the wharf was renewed on a space 200 feet long and 27 feet wide. Expenditure, $3,102.07.

During the year 1902-3, a movable slip was built, a waiting room was commenced, the flooring of the wharf was renewed at different places. Expenditure, $1,523.30.

During the year 1903-4, the shed was covered with sheet iron, the waiting room was completed, a freight shed was built and the flooring was repaired. Amount expended, $1,101.80.

During the year 1904-5, a new pier 30 by 30 was constructed on the east side of the wharf, 22 feet from the headblock and close to the wharf; the headblock is connected with the pier by stringers supported on corbels; the space and the block are planked; the piers are sheathed, provided with fenders, and the whole is fully ballasted with stone.

The pier on the west side of the block, built in 1901, was repaired, levelled for 5 feet, replanked and new stringers were put on.

On the west side of the wharf a big boulder was blasted. Amount expended, $2,421.75.

During the fiscal year ending June 30, 1906, a landing pontoon was built. Amount expended, $2,498.69.

During the fiscal year 1906-7, the work done was the completion of the pontoon commenced in 1905-6. This pontoon is 60 by 20, built with 5 kelsons of 10 by 10; bottom and shipboard are of 4 inches, stringers 10 by 10, and decking 3 by 6. The pontoon is provided with chains, &c. Amount expended, $981.30.

ST. CHARLES BORROMÉE.

St. Charles Borromée is a village situated on the north shore of La Grande Décharge of Lake St. John, in the county of Chicoutimi, twenty-one miles above Chicoutimi town.

During the year 1904-5, a certain quantity of timber was bought, in view of the construction of two landing piers. Amount expended, $995.95.

During the year 1905-6, two landing piers, one on each side of the river, 100 feet in length by 40 feet wide, were commenced in round timber open-face cribwork and fully ballasted with stone.

A certain quantity of timber was bought in view of the completion of the two landing piers. Amount expended, $3,993.35.

During the fiscal year 1906-7, the work done was the continuation of the two landing piers commenced in 1905-6; there are three slopes for the ferry.

The north pier is completed, except the sheathing; the south pier is built for a height of 15 feet, and both are fully ballasted. Amount expended, $3,004.60.

ST. EDOUARD DES MÉCHINS.

The village of St. Edouard des Méchins, in the county of Rimouski, is situated on the south shore of the St. Lawrence, thirty-five miles below Matane. It has a population of 600, consisting chiefly of fishermen and lumbermen. Some farming is also done.

To provide more facilities of landing to the inhabitants of this part of the coast of the St. Lawrence, and also to supply the total want of shelter for their craft, the department decided to build a wharf at that place.

On October 30, 1906, a contract was entered into for the construction of the proposed work, the contract price being $26,900.

The new wharf will consist of a stone approach, 20 feet long, and a cribwork 583 feet in length, having a width of 20 feet for a distance of 303 feet from the shore,

and 30 feet for the remainder or a distance of 280 feet; the cribwork which is close-faced, to have a batter of 1 in 12 on both sides.

The depth of water available at the outer end is 18 feet at low spring tides.

Spring tides rise 13 feet; neaps, 7 feet.

ST. FÉLICIEN.

St. Félicien, a post village in Chicoutimi county, is on the Ashuapmouchouan river, fifteen miles from Roberval, on the Quebec and Lake St. John Railway.

During the year 1895-6, a wharf was built to accommodate the local trade. It is 70 feet in length, 26 feet in width and 22 feet high at the outer end, at which vessels drawing 8 feet can lie at low water. A shed, 20 feet square, was erected on the wharf at its outer end.

During the year 1899, an addition 90 feet long, parallel with the channel, and 40 feet wide, was constructed at right angles to the wharf at its outer end.

During the year 1900, the sheathing, which had been damaged by ice, was renewed on a length of 30 feet and 10 feet high, at a cost of $100.

During the year 1903-4, fifteen boulders obstructing the channel were removed. Amount expended, $302.94.

During the year 1904-5, certain repairs were done to the wharf, the sheathing was renewed, stringers replaced, planking completed and the shed repaired and painted. Amount expended, $629.11.

During the winter of the same year a certain quantity of boulders obstructing the channel were removed, at a cost of $318.10.

ST. FRANÇOIS, I.O.

St. François, I.O., is situated at the eastern end of the island of Orleans, twenty-five miles below Quebec.

During the last fiscal year a contract was entered into with Mr. J. A. Lemay, for the construction of an approach to the isolated pier, built in 1903. This approach consists of a crib 250 feet long by 30 feet wide. Up to March 31, 1907, 78 per cent of the work had been constructed.

The expenditure for the fiscal year amounted to $16,031.10.

ST. FULGENCE.

St. Fulgence (Anse aux Foins) is a village in Chicoutimi county, on the north shore of River Saguenay, ten miles below the town of Chicoutimi.

The construction of a wharf was commenced in 1903-4, starting from shore by an approach of 75 feet in length, 22 feet in width and 10 feet in height, and a pier at 25 feet from the approach 25 by 22, and 14 feet in height.

This work is built of round logs, open face, to be sheathed; the whole is fully ballasted. Expenditure, $998.37.

During the year 1904-5, the approach, the pier and other piers of 25 by 22, placed 25 feet apart, were completed. Fenders of 8 by 10 were put on; the stringers and the corbels are of 12 by 12, the planking of 3-inch spruce deals, thus giving a whole length of 275 feet of wharf completed, except the sheathing. Another pier was started and built for 14 feet in height. Amount expended, $4,993.28.

During the year 1905-6 three piers of 25 by 22 were built of an average height of 16 feet; the last pier, 30 by 30 feet was started and built for a height of 10 feet. The superstructure is completed up to the last pier, with corbels, stringers of 12 by 12 and planking of 3 inches. Amount expended, $5,017.18.

During the fiscal year 1906-7, the wharf, commenced in 1903-4, was continued to a length of 503 feet by 20 feet wide, 45 feet at outer end and 24 feet in height, built on piers, with a space of 25 feet between each pier. The superstructure is on

corbels and stringers of 12 by 12, with a flooring of 3-inch spruce deals. The piers are provided with fenders and fully ballasted with stone; two spaces near shore were partly filled with brushes and stones, to break the effect of ice. A certain quantity of timber was bought to complete the sheathing of the wharf. Amount expended, $3,000.25.

ST. GÉDÉON.

St. Gédéon parish is situated on the south shore of Lake St. John, thirty-three miles west of Roberval.

This wharf, constructed on the bank of the River 'Kouchpigan,' commonly called 'Belle Rivière,' consists of a block, 60 feet in length, 30 in width and 22 in height, built principally of white pine. It is connected with the shore by pile work, 70 feet in length; the whole length is planked over, the approach built of stone, gravel, &c.; a shed, 20 by 25 feet, was erected for freight shed and waiting room. Total cost, $2,998.

ST. GÉDÉON ISLAND.

St. Gédéon island, in the parish of St. Gédéon, is situated on the south shore of Lake St. John, thirty-nine miles west of Roberval.

During the year 1903-4, a certain quantity of timber was purchased in view of the construction of a wharf at that place. Amount expended, $1,982.19.

On July 13, 1904, a contract was awarded, in the sum of $8,890, for the construction of a wharf in the bay of St. Gédéon island.

The work done is the construction of seven piers of 20 by 20 at 25 feet apart; the headblock is 40 by 30 and 25 feet in height, at outer end, with two slips and an abutment of 20 feet. The whole is completed. Amount expended, $7,500.

During the winter of the year 1905-6, a certain quantity of boulders around the wharf were removed at the cost of $177.28.

In the spring, an approach and a freight shed were built at the cost of $736.13.

During the fiscal year 1906-7, the amount of $209.92 was expended in removing boulders.

ST. IRÉNÉE.

St. Irénée is a village situated in the county of Charlevoix, on the north shore of the St. Lawrence, seventy-eight miles below Quebec and some six miles west of Murray Bay.

During the last fiscal year, the flooring of the wharf was completely renewed and a railing was placed on the whole length of the eastern side of the wharf. Repairs were also made to the freight shed.

The expenditure for the fiscal year 1906-7 amounts to $1,839.68.

ST. JEAN DES CHAILLONS.

St. Jean des Chaillons, a post village and parish in Lotbinière county, is situated on the River St. Lawrence, fifty-seven miles above Quebec. Population of village, 1,000.

In 1906-7, the work under contract was completed. During the last fiscal year, the inshore extension of landing pier, to connect with cliff and proposed roadway to public highway, was built by day labour.

The extension, measuring 27 feet in length by 27 feet wide on top and 6 feet in height, with slope of 1 foot in 1 foot, on west side, fills up the gap, which would have been left between the shore and the 250 feet of wharf built by contract.

Besides this extension, there was also built a side roadway, at high water, at foot of cliff, measuring 100 feet in length, 27 feet in width and average height of 5 feet 6 inches of close-faced cribwork, planked with 5-inch tamarack planks, sheathed on

outer face with 4-inch tamarack; the sheathing of extension slope is of 8-inch tamarack and flooring of 5-inch; the whole extension and side roadway are fully ballasted with stone to top.

Total expenditure during 1906-7, $14,387.70.

ST. LAURENT, I. O.

The village of St. Laurent, in the county of Montmorency, is situated on the south side of the island of Orleans, ten miles below Quebec.

The western slip of the wharf was completely rebuilt and one-quarter of the flooring of the wharf renewed. The freight shed and waiting room were painted and minor repairs made to the movable slip and floats.

The expenditure for the fiscal year 1906-7 amounts to $929.10.

ST. PAUL DE L'ILE AUX NOIX.

St. Paul de l'Ile aux Noix, formerly St. Valentin, is on the west shore of the Richelieu river, in St. John's county, near the southern boundary, some four miles north of Lacolle or twelve miles south of St. John's.

As this place had no wharf accommodation, the large quantity of hay, which is annually exported to the United States ports of Lake Champlain, and the farm produces shipped to St. John's, had to be conveyed in scows to barges anchored in the river channel, thereby causing double handling and correspondent expenses, a sum of $5,500 was appropriated in 1897 towards the construction of a landing pier, at the foot of the government road leading from the highway to the l'Ile aux Noix ferry. On March 17, 1897, a contract was entered into for the construction of:—

(*a*) A stone and earth embankment, 135 feet long, 25 feet wide with sides and outer end sloped 1 in 1;

(*b*) A trestle approach, 156 feet long and 20 feet wide;

(*c*) A cribwork headblock, 60 feet long and 35 feet wide, with outer face standing 19½ feet high in 9½ feet of water, at low level.

The construction was started immediately and the structure completed in 1898, at a total cost of $6,152.43. The government road was raised above the level of the spring freshets and properly fenced.

Minor repairs in 1900-1 cost $66.50.

During May and June, 1904, corbels and stringers, 6 by 12 inches, were placed between all the existing ones which were 6 feet 4 inches apart, three-quarters of the flooring was renewed and a small storehouse, 16 by 20 feet, erected. Work done by day labour, at a cost of $1,158.15.

During August last, a guard-railing was placed on both sides of trestle approach, and some thirty planks of flooring renewed.

Expenditure in 1906-7, $6,642.50.

ST. SIMÉON.

St. Siméon is situated on the north shore of the St. Lawrence, in the county of Charlevoix, 107 miles below Quebec.

During the last fiscal year, a movable slip, with complete apparatus, was built into the wharf. A freight shed and waiting room and a lantern tower were also built. During the season of navigation, the northeast corner of the wharf was very badly injured by a steamer in landing and immediate repairs had to be made.

The expenditure during the fiscal year 1906-7 amounts to $2,242.39.

ST. TIMOTHÉE.

St. Timothée is a post village in Beauharnois county, on the south shore of the St. Lawrence, at the head of the Chute aux Bouleaux rapids and on the Grand Trunk railway, five and a half miles from Valleyfield.

During fiscal year 1882-3, a landing pier was constructed, consisting of a block 100 feet long by 24 feet with 7 feet of water, along outer face, and a stone, earth and gravel roadway 237 feet long and 20 feet wide at top. Expenditure, $1,841.46.

On account of some damage by ice during the spring of 1884, repairs cost $187.21.

During the summer of 1889, the headblock was enlarged outward 44 by 100 feet, by the construction of three small cribs, each 25 by 20 feet, some 20 feet apart, with outside face 44 feet from face of old block, all intervening spaces being spanned with timber stringers. Cost, $3,773.15.

During fiscal year 1899-1900, a number of stringers and the flooring were renewed, the storehouse and waiting room were repaired and painted, a cattle yard 60 by 15 feet, at the inner angle of the wharf alongside the roadway was made with stone and earth and properly fenced, and the roadway was improved. Expenditure, $801.45.

In February last, the three cribs constructed in 1889 were razed from low water level and rebuilt 3 feet; the span between these cribs and the old block entirely filled in with stone, some 140 toises, and minor repairs made at a cost of $1,589.39.

ST. VALIER.

The village of St. Valier, in the county of Bellechasse, is on the south shore of the St. Lawrence, twenty-one miles below Quebec.

To help the trade and provide some facilities of landing for the shipment of farm produce, in permitting the coasting steamer *Champion* to call there, the necessary amount was appropriated by parliament, for the construction of a landing pier at St. Valier.

On February 6, 1907, articles of agreement were entered into for the building of the proposed work; it will consist of a stone approach 27·5 feet, together with a timber cribwork filled with stone ballast, of 272·5 feet in length, with a batter of 1 in 12, by a width of 22 feet and a height of 21 feet at the outer end.

Expenditure in 1906-7, $248.79.

ST. ZOTIQUE.

St. Zotique is a post village in Soulanges county, on the north shore of the St. Lawrence, two and a half miles above Coteau Landing.

The mooring pier at Coteau Landing having been found to be too near the head of the Coteau rapids, for the safety of rafts and steamers requiring to tie up, a mooring pier was begun at St. Zotique in 1881-82, completed in 1884. It consisted of a close-faced crib headblock, 100 feet long by 24 feet wide, sunk in 9 feet of water, and of a 12 foot approach, composed of 34 close-faced cribs measuring 8 by 12 feet, placed at intervals of 20 feet and spanned with 12 by 12 stringers, supporting flooring, making total length of pier 1,150 feet.

Expenditure in 1881-2 was $1,070.75.

Expenditure in 1882-3 was $3,479.74.

Expenditure in 1883-84 was $4,708.18.

In 1885-6, the headblock was lengthened to 132 feet 4 inches, the approach widened to 24 feet, the ice-breaker rebuilt and a guard-railing placed on both sides at a cost of $1,200.73.

In 1893-4 and 1894-5, sums of $2,490.75 and $1,599.85 respectively, were expended in reconstructing part of the work and in general repairs.

During May and June, 1902, the ice-breaker was resheathed with 8-inch rock elm part of headblock and of approach refloored, several stringers renewed, the south-eastern corner of the headblock sheathed with rock elm covered with steel boiler plate, and general repairs made to storehouse and guard-railing at a cost of $1,039.61.

During August, 1902, minor repairs cost $203.12.

In June 1904, several stringers of approach and part of the flooring were renewed at a cost of $509.01.

During March last, all the timber stringers between cribs were renewed, temporary repairs were made to the cribs and 3-inch pine deals were bought for the greater part of the flooring.

Expenditure for last fiscal year, $1,752.53.

SAULT AU MOUTON.

Sault au Mouton is situated on the north shore of the St. Lawrence, three miles from Mille Vaches village.

Sault au Mouton river makes a channel which is navigable at high water and is very dangerous on account of boulders.

During the fiscal year 1906-7, some of the boulders were removed. Expenditure, $475.03.

SAULT MONTMORENCY.

Sault Montmorency is a small town situated eight miles below Quebec, on the north shore of the River St. Lawrence.

The cribwork revetment wall, built by this department in 1904-5, was continued for a length of 300 feet. This construction consists of an open-faced timber crib filled with stone ballast. The height of the crib is 9 feet and its width 12 feet.

The expenditure for the fiscal year 1906-7 amounts to $3,270.89.

SOREL ICE PIERS.

Sorel is an incorporated city, the shiretown of Richelieu county, situated on the right bank of the River Richelieu, at its mouth in Lake St. Peter, some forty-five miles northeast of Montreal.

With a view to protecting the properties on both sides of the river, near its outlet at Sorel, and the boats which winter here against disastrous ice shoves from the St. Lawrence and the run of ice in the Richelieu during freshets, five ice-breaking piers were built, in the bed of this stream, between 1888 and 1892, two of which are on the west side of the last named river near its confluence with the St. Lawrence.

All these piers have proven of good service, preventing the destruction of much valuable property.

The two piers at the mouth of the Richelieu measure 30 feet by 24 feet and are some 20 feet high; the top being about level with extreme high water on the St. Lawrence. They are all calculated to resist a great pressure from the St. Lawrence, but were, at the time of their construction, insufficiently protected from the run of the Richelieu ice, and for this reason were considerably damaged chiefly in the spring of 1896.

During the fiscal year 1896-7, a sum of $441.53 was applied in making good the damage done and strengthening the works by means of sheathing, bracing, corner plates, &c.

During 1898-9, the three ice-breakers above the South Shore Railway bridge were repaired. The top courses of timber, which were found damaged, were removed and renewed, and the sheathing repaired. Cost, $555.93.

Since, large sums were expended in construction and general repairs: In 1900-1, $811.66; in 1901-2, $1,990.83; in 1903-4, $2,280.59.

From October to the end of March, 1904-5, the two ice-breakers near St. Joseph de Sorel were razed to low water and rebuilt up to 15 feet above E.L.W.L., and entirely filled with stone. Cost, $6,016.89.

The ice shoves of April following badly twisted and moved aside some 4 feet of the superstructure of the outer one of these piers.

In October and November last, the old structure was purposely destroyed by fire and a stronger pier substituted. The latter is formed of handlaid stone with a 1½-foot concrete covering mixed 1-3-5 and reinforced with horizontal and vertical 1½-inch

round iron bars. As it now stands, the ice-breaker is 29 by 24 feet at the base, 17 feet high, with two slanting faces, starting 2 feet from bottom and inclined 1½ in 1 on the Richelieu and St. Lawrence upstream sides, the two other faces being inclined 1 in 12. The dimensions of the top are 8 feet square.

THREE RIVERS (QUAI BUREAU).

More deep water wharf accommodation being required in the harbour of Three Rivers, an agreement was entered into with Mr. Randolph Macdonald, contractor, for the construction of 1,968 lineal feet of deep water wharf, on the north shore of the St. Lawrence, and the western section of the city of Three Rivers, about eighty-two miles below Montreal.

By the agreement above mentioned, dated December 7, 1903, the work contemplated should have been finished before November, 1905, but owing to high water prevailing during the summer of 1905, the work could not be carried on with all the celerity desired, but in 1906 the water remained low enough all summer to allow the contractor to complete the concrete work during the year of 1906.

The work done and materials delivered on contract ($330,730) from the beginning of the work to March 31, 1907, is about 97·27 per cent.	$321,732 60
Amount to be deducted for work done up to June 30, 1906, being about 63·07 per cent.	$208,473 69
Leaving a balance of.	$113,258 91

The value of the work performed during the fiscal year of 1906-1907 represent about 34·20 per cent of the work to be done by contract.

Extra work: Material supplied to fill the gap between the hundred foot embankment and the loop line, the property of the Canadian Pacific Railway, about 58·76 per cent done.	$ 10,193 40
Total expenditure in 1906-7.	$ 57,897 34

TICOUABE.

Ticouabe or St. Méthode, a post village in Chicoutimi county, is situated at the outlet of the river of the same name, twenty-one miles from Roberval.

A small landing was built at this place, to accommodate the local trade and to help its development. The wharf consists of a solid block of close-faced cribwork, 30 by 30 feet, built a small distance from the shore and connected to it by a platform which is supported on trestles and is 103 feet long and 25 feet wide. A combined freight and shelter shed, 25 by 30 feet, was also built. Amount expended, $1,611.79.

In the spring of the year 1902-3 the wharf was badly damaged by ice. During the fiscal year 1903-4, the trestles were renewed and corbels were put on to support the floor-stringers. The outer pier of the wharf was levelled, and, to prevent any sinkage and give it more strength, the head was surrounded with pile-work. Amount expended, $792.08.

TROIS PISTOLES.

TroisPistoles, in the county of Temiscouata, is an important village on the Intercolonial Railway, twenty-five miles below River du Loup. The land in the vicinity is fertile, and the place is flourishing. It is somewhat frequented as a summer resort.

Along the River Trois Pistoles stand large saw and pulp mills.

On the west side of the entrance of the harbour, is the public wharf.

The harbour being much exposed to northeasterly winds, a breakwater was built across the entrance to provide the necessary shelter. This work, which is 350 feet in length, was done during the years 1904 and 1905.

During the last fiscal year, a platform, spanning an opening left in the wharf, being worn out and dangerous, was replaced with timber cribwork filled with stone. This opening whose dimensions were 50 feet long, 20 feet wide by a height of 19 feet, caused much trouble to vessels standing near the wharf.

The flooring of the wharf has also been renewed upon a surface of 3,500 square feet, with most of the stringers.

Fenders were placed along the southern face of the breakwater, at every 10 feet.

These works were performed during the months of July and August, at cost of $2.599.84.

Spring tides rise 18 feet; neaps, 10 feet.

VERDUN.

Verdun is an incorporated village on the island of Montreal, in Jacques Cartier county, two miles south of Montreal.

In order to accommodate the farmers of the south shore of the St. Lawrence, near Cote St. Catherine, opposite, a wharf was commenced by day labour in October, 1899, and completed in June following, at a cost of $2,353.23. It consists of a crib head-block, 82 feet long, 20 feet wide, 6 feet high above low water level, with icebreaker at upstream end; and a close-faced crib approach, 75 feet long and 18 feet wide. The outer face of block stands in 6 feet of water at low level.

Minor repairs in 1900-1 cost $107.66.

During June, July and August, 1906, extensive repairs were made to the wharf which had been badly damaged by ice. The structure was razed to one foot above low water and rebuilt 2 feet, the whole well filled with stone, gravel and sand properly hardened on top. The roadway from public road to wharf was also improved by the construction of a timber embankment, 160 feet long and 2 feet high, so as to prevent landslides.

Total expenditure in 1906-7, $1,224.98.

VILLE MARIE (BAIE DES PÈRES).

Ville Marie, Pontiac county, is an important agricultural centre located on Baie des Pères. It is a point of call for boats plying on Lake Timiskaming. There being no railroad connections, landing facilities are indispensable.

In 1887, the Dominion government purchased from the Lake Timiskaming Colonization Railway Company their wharf, for the sum of $3,000 (*See* O. C. 83,568; 20-12-87). The wharf then consisted of an approach some 400 feet in length, 16 feet wide, leading to a landing head 26 by 37 feet in surface dimensions, the frontage of which is 26 feet. The whole structure being built of small open-face cribwork piers supporting the floor system, 15 feet above L.W.L.

In 1892, $68.12 was spent on repairs; the work being thoroughly repaired in 1895 at a cost of $945.63; and in 1896, $25.65 was expended on the wharf.

At its session of 1903, parliament appropriated $2,500 towards required repairs to the upper structure. No repairs were made that year because local interests demanded that the amount available be applied towards the construction of a wharf on a different site which, upon examination, proved to be too costly.

During the fiscal year 1904-5, some urgent repairs were made at a cost of $361.33: but on account of the interference with the heavy traffic, the work was only of a temporary nature. The sum of $160.43 was paid to the Lumsden Line steamers, for repairs between 1896 and 1904.

The work of reconstruction started with the close of navigation in 1905, and was practically completed in August, 1906.

The unfinished work of sheathing crib corners was done in March, 1907.

The wharf as reconstructed, at a cost of $3,960.42 is on cribwork piers and consists of an approach, 350 feet long, 18 feet wide, with substantial handrailing, leading to a landing head of 40 feet frontage with slip and 100 feet deep, but of variable width, having been built out from on either side, from time to time, by the navigation interests. The total frontage is now nearly 200 feet.

Expenditure, including dredging, during fiscal year 1906-7, $3,243.87.

PROVINCE OF ONTARIO.

AMHERSTBURG.

Dredging.

The town of Amherstburg, in the county of Essex, in the township of Malden, is situated on the east bank of the Detroit river, about five miles from Lake Erie and fifteen miles south of Windsor, to which place it is connected by electric car service. The Michigan Central Railway also runs into Amherstburg. Population about 2,500. It is one of the oldest settlements in Ontario.

At the last session of parliament, the sum of $10,500 was appropriated for the purchase of some water lots, and for the completion of dredging in the middle ground, in the Detroit river, opposite the town, to a depth of 21 feet below low water level, thus providing safe entrance to town docks for deep draught vessels from the main channel of the river.

An agreement was entered into with the Weddell Dredging Company, of Trenton, for the performance of this work, at a price of 98 cents per cubic yard, place measurement.

At the beginning of the fiscal year this work was in progress; it was completed on July 7, 1906.

The work performed consisted in the sweeping and cleaning up of boulders.

The total expenditure on dredging during the fiscal year 1906-7, including inspection, amounted to $9,319.83.

BAYFIELD.

Bayfield is a village in the county of Huron, situated on the easterly shore of Lake Huron, at the mouth of Bayfield river, twelve miles south of the town of Goderich.

At the last session of parliament the sum of $800 was appropriated for repairs to piers and for dredging, and on July 17, last, authority was given to proceed with the work, by days' labour.

Repairs to piers were commenced on August 3, and completed on September 26, 1906, when grant was expended.

Work performed consisted in the repairing of outer end of south pier and filling same with stone; levelling up inner end of south pier; raising and levelling of 120 feet of centre of this pier, which had settled badly towards the river, and redecking of same. Some general repairs in the way of renewal of planking and gravel filling were performed on north pier.

The total expenditure on these works, between July 1, 1906, and March 1, 1907, is $795.61.

BELLE RIVER.

Dredging.

Belle River is a village situated on the south shore of Lake St. Clair, and on the London and Windsor Division of the Grand Trunk Railway, ninety-three miles from

London and seventeen miles from Windsor. It is a French settlement of about 1,000 inhabitants.

At the last session of parliament the sum of $3,500 was appropriated for dredging and renewal of close pile protection work.

In accordance with instructions received, an agreement was subsequently made with the Windsor Dredging Company, Limited, of Windsor, for the dredging of a channel at entrance to harbour, to a depth of 9 feet below low water level.

Operations were commenced on September 26, and continued until November 30, 1906, when dredging ceased for the winter.

Owing to the exposed position of this work, considerable filling in occurred, and the entire channel required has not yet been completed.

In the performance of the above work some 9,849 cubic yards of clay were excavated.

Total expenditure during last fiscal year, $2,556.50.

BLANCHE RIVER.

The Blanche empties into Lake Timiskaming, west of the Quebec boundary. It is navigable to Tomstown, twenty-six miles from its mouth. An important traffic has developed in this river. On account of land slides, the bed of the river is much obstructed by snags. A snag boat for removing these was built in 1905, operating in an experimental way for six weeks in the fall of that year. Two scows and a house boat were since added. Operations were resumed on June 25, and discontinued on November 1, 1906.

During the season of 1906, the whole river was swept once, while the worst parts were gone over a second time at low water. Working expenses, including rent of tug tender, were roughly $1,300 per month. The plant has cost about $5,000. 2,350 snags were removed, at a total cost of $2.30 per snag, which varies from a 4-ton stump and trunk, to a sunken saw-log, small limbs and brush not counted. The spoil of the snag boat is unloaded by team and derrick on one of the settlers farms, there to be burned, or otherwise disposed of at no further cost to the department.

The work performed during the past season has permitted navigation at extreme low water level, when it was impossible to do so the previous year with the river level one foot higher. It is expected that the main work will be completed during the coming season, including the making of a channel through gravel bars at the head of navigation.

(For further particulars, see report for fiscal year 1905-6.)

Expenditure during fiscal year 1906-7, $5,574.98.

BRACEBRIDGE.

Bracebridge is a town situated on the north branch of the Muskoka river, district of Muskoka, 125 miles by rail north of Toronto.

On July 25 last, authority was given to expend the sum of $350 for the completion of the road approach to the new government wharf.

The work consisted of the construction of a roadway, 650 feet long by 18 feet wide, composed of stone and gravel. The greatest grade of the roadway is 10·6 per cent. A splendid roadway has been completed with iron railing on the sides where required.

Total expenditure for the fiscal year 1906-7, $427.40.

BRONTE.

Bronte is a village in the county of Halton, on the north shore of Lake Ontario, twenty-seven miles southwest from Toronto.

At the last session of parliament, the sum of $2,200 was appropriated for harbour improvements, and on July 17, last, authority was given to proceed with the work by day labour.

Work was commenced on September 15, but is not yet completed, as a berth is required to be dredged before the cribs can be sunk in position.

The work consists in the framing of cribwork protection, 40 feet by 20 feet, to be placed at westerly end of northerly pier, in the proposed turning basin, to prevent the banks from being inundated during the season of freshets, on Twelve Mile creek; about 100 feet of close piling has been constructed on the southerly side of harbour, to protect the bank from erosion.

Total expenditure for fiscal year 1906-7, $2,199.

BURLINGTON CHANNEL.

Burlington channel, in the county of Wentworth, is simply a cut through a piece of low land which partially separates Lake Ontario from a large sheet of water called Burlington bay, thereby enabling vessels to reach the wharfs at the city of Hamilton. Over this cut the department has erected a swing bridge.

At the last session of parliament, the sum of $500 was appropriated for the construction of a driveway to the south pier, to replace the foot bridge, and on October 5 last, authority was given to proceed with the work.

The work consists in the construction of a driveway, 235 feet long by 50 feet wide, along the south face of the south pier, composed of close cribwork along the bay side, filled with sand and gravel, and connecting with roadway leading from the beach to Hamilton.

The swing bridge staff were employed from July 1 to December 19 last, when lights were put out and navigation closed for the season, resuming work on March 21.

Expenditure for fiscal year 1906-7 : Driveway, &c., $5,241.59 ; maintenance of bridge and wages of staff, $1,201.77.

COBOURG.

Cobourg is a large town on the north shore of Lake Ontario, in the county of Northumberland, on the main line of the Grand Trunk Railway, sixty-five miles east of Toronto.

At the last session of parliament, the sum of $5,000 was appropriated for repairs to piers, and on July 17 last, authority was given to proceed with the work by day labour.

Work was commenced on July 1 and carried on until October 31, when it was suspended for the season.

The work consists in general repairs, such as redecking where necessary, and the substitution of sound timbers for the decayed parts.

Total expenditure for the fiscal year 1906-7, $1,960.94.

COLBORNE.

Colborne is situated on the north shore of Lake Ontario, about fourteen miles east of Cobourg; population, 1,000.

At the last session of parliament, the sum of $5,000 was appropriated for the construction of a wharf at this place.

Plans and specifications for the work have been prepared and forwarded to the department.

COLCHESTER.

Colchester is a village situated on the north shore of Lake Erie, in the county of Essex, about four miles south of Harrow, and about fourteen miles from the Detroit river. Harrow is the nearest point with railway connection. Population about 200.

During the last session of parliament the sum of $2,000 was appropriated for the completion of the wharf at this point, and on July 7, 1906, authority was given to proceed with the work by day labour.

Operations were resumed on July 9, and continued until November 30, when work closed down for the winter.

The work performed during that period consisted of the construction of 34 feet of close-faced cribwork substructure, 18 feet wide, filled with stone ballast; also the substructure of an 'L,' 12 feet by 28 feet, at outer end of work; and 71 feet of superstructure of concrete side walls with stone and gravel filling in rear.

The stone approach to this wharf, 178 feet long, was raised about 1 foot throughout its entire length with stone and gravel.

Total expenditure during 1906-7, $1,596.68.

COLLINGWOOD.

Collingwood is situated on the south shore of Georgian bay, township of Nottawasaga, county of Simcoe, ninety-four miles by rail from Toronto. It is the terminus of the Northern and Hamilton and Northwestern Railway; both lines are now owned and operated by the Grand Trunk Railway Company. There is an extensive trade in shipbuilding, grain and lumber, and it is the starting point for steamers for Owen Sound, Sault Ste. Marie, Parry Sound, &c. Population, 5,000.

As constructed at present, the harbour is large and commodious, being protected on the north and east sides by extensive breakwaters.

On August 25, 1905, a contract was awarded for the sum of $29,900 to construct a wharf 411 feet long by 40 feet wide.

Work was commenced on December 26, 1905, and completed on October 22, 1906. The wharf is composed of cribwork substructure with concrete superstructure.

On May 10 last, authority was given to place Mr. C. S. Boone's dredge at work to remove 14,000 cubic yards in situ of rock from the north side of the channel, in order to increase the area of the turning basin. Dredging was continued on July 1 and completed November 3. The dredge removed 20,571 cubic yards, scow measurement.

Total expenditure for fiscal year 1906-7, $123,073.88.

CUMBERLAND.

Cumberland village, in the county of Russell, is situated twenty miles below Ottawa and two miles south of Buckingham Junction, on the Canadian Pacific Railway. Besides the regular ferry service, the wharf provides for considerable traffic for passenger and freight boats plying on the Ottawa river.

In November, 1904, the dredge *T.F.M.* (leased) prepared a berth for the foundation of a wharf, by removing blasted rock, at a cost of $320. The wharf was built by contract the following winter, at a cost of $6,649.85. In June, 1905, two slips were cut and angle irons were placed to protect inner corners of wharf, at a cost of $74.68. In November and December of the same year, a freight shed was built at a cost of $534.12, of which $347.10 was expended before June 30 in procuring all required materials; four batter fenders costing $106.94 were added, and the remnants of an old pier and obstructing boulders were removed by one of the departmental dredges, at a cost of some $200.

At its session of 1906, parliament granted the sum of $1,100 for further improvements to this structure, namely, raising decks and approaches about 2 feet and sheathing the upper end and front of cribwork, to consolidate the block against ice shoves, to which it was exposed on account of the destruction in the previous year of the old pier immediately above. These improvements were effected in December and January, at a cost of $1,186.76.

The wharf, as improved, extends 108 feet from the shore with 90 feet frontage, carrying 8 feet at low water. The head block, 30 feet wide, has landings to correspond with the wide range of river level, and is built of close-face cribwork on rock bottom. The exposed faces are sheathed with 9-inch tamarack. The approaches are 18 feet in width, built of dry masonry walls, earth filled, topped with road metal at elevations of 5·75 and 15·75 feet above mean low water level. A two-story freight shed, 18 by 18 feet, with shelter roof, constructed in rear of headblock, between two low level approaches.

Expenditure during fiscal year 1906-7, $1,186.76.

GODERICH.

Goderich is a town situated on the east shore of Lake Huron, in the county of Huron, and at the mouth of Maitland river, about sixty-eight miles from Sarnia, and sixty-three miles from London. It is the terminus of the Buffalo and Goderich branch of the Grand Trunk Railway, and of the Guelph and Goderich branch of the Canadian Pacific Railway. Population is about 5,500. It is the county town and possesses many industries. Located on the harbour front, is one of the largest flour mills in Canada, the output being 1,200 barrels a day, and which concern brings in, by boat from Fort William, about two million bushels of grain annually for use at this port.

A new elevator was completed last fall, built of reinforced concrete, and with a capacity of one-half million bushels.

A new station and terminal yards are now being constructed by the Canadian Pacific Railway at this point.

The surrounding country is rich in farming products. It is also a favourite summer resort; it is a port of call for three lines of steamers, while the boats carrying grain to the elevator and mill are of the deep draught type.

At the last session of parliament, the sum of $50,000 was appropriated for harbour improvements.

On July 23 last, authority was given to expend the sum of $16,300 for the cleaning and enlarging of a basin in the inner harbour to a depth of 19 feet below L.W.L.; also for additional dredging required in channel between piers and at outer entrance to same.

Dredging was commenced on July 25 and continued until November 15, during which period some 35,107 cubic yards of clay, sand and mud, and 1,055 cubic yards of rock were excavated.

Between July 2 and 19, inclusively, days' labour was employed in removing of sunken logs in inner harbour, which were proving a menace to navigation.

The improvements to the basin in the inner harbour has already proved of great service to the large grain boats unloading in this harbour; a boat, 300 feet long, and drawing 18 feet 6 inches of water, is now able to turn conveniently in this basin.

On August 2 last, authority was given to expend the sum of $750 for the renewal of a portion of the river breakwater pier, which was destroyed by fire on July 10 previous, and subsequently an additional $600 was authorized for general repairs to piers and the removal of concrete blocks from north pier, work to be done by day labour.

Work was commenced on August 20 and carried on intermittingly until November 30 last, and consisted in the renewal of the larger portion of about 90 feet of superstructure of inner end of breakwater pier; stone filling and general repairs to the decking of north pier, and renewing of planking of south pier.

On August 3 last, authority was received to enter into an agreement with the London Electrical Construction Company, Ltd., of London, for the supplying and laying of necessary rubber covered wiring and cable from the power house of the municipal lighting plant out to the breakwater now partly constructed, for the purpose of lighting same. The lamps are to be supplied and all necessary wiring and connection to be made by the Electrical Construction Company. The three lamp posts were constructed by the department, being fastened securely to the cross-ties on substructure.

The above work was completed, with the exception of testing, when the big storm of October 27 and 28 last arose, doing considerable damage to the substructure of the breakwater, carrying away the cross timbers to which lamps were fastened and portion of the cable strung along breakwater for lighting purposes.

It was found impossible to repair the damage done last fall, consequently the work was suspended until spring.

The town council of Goderich have undertaken to supply the necessary current for the lighting of these lamps, as long as such cable and lamps are maintained by the department.

No work has been performed on the construction of breakwater since its partial destruction by the big storm of October 21, 1905.

A settlement was made with the contractors, Messrs. Battle and Conlon, for the work performed to the date of the storm just mentioned, and material on ground taken off their hands by the department. Plans were prepared for the completion of this work, and tenders called for on October 20 last. Contract had not been awarded by the end of the fiscal year.

On November 15 last, authority was given to expend the sum of $50 in rescuing and piling up safely, considerable timber which had been washed off the substructure of this breakwater. This work was performed between December 17 and 22, 1906, inclusively.

The total expenditure on these works, between July 1, 1906, and March 31, 1907, was:—

Dredging, including inspection, repairs to piers, &c., $19,812.64.

GRAND BEND.

Grand Bend is a village situated on the easterly shore of Lake Huron, at the mouth of the Sauble river, about fifteen miles from Exeter, which is the nearest railway station, on the London and Wingham branch of the Grand Trunk Railway, about thirty miles south of Goderich.

On July 10 last, authority was received to expend the sum of $600 to repair damage done to water pier caused by previous storms and settlements. This work was commenced in July and continued until September 12, 1906.

On November 23 following, authority was received to expend a further sum of $100 in completing repairs.

As reported on November 22 last, the approach to this wharf was washed away by the storm of October 27 and 28 last, but, owing to the large amount of ice existing, the approach could not economically be renewed before the end of the fiscal year.

The total expenditure on these works, between July 1 and March 31, 1906, was $699.64.

HAILEYBURY.

The town of Haileybury, on the west shore of Lake Timiskaming, is the chief lake port on the route of the Toronto and Northern Ontario Railway, 108 miles from North Bay. Naturally it links the rail and water traffic, navigation extends over a distance of 150 miles. It is five miles from Cobalt, the heart of an important mineral district.

The construction of a wharf was commenced in 1900-1, and proceeded with during irregular intervals until the completion in June, 1906. (For full particulars of construction see report for fiscal year 1905-06).

In 1890, Mr. C. C. Farr, Haileybury's first resident, built two piers 20 by 20 feet, intended to serve as the nucleus of a wharf. This submerged obstruction, lying 150 feet south of present wharf, was removed by the dredge *Queen*, in 1895, at a cost of $290.

The wharf consists of a dry masonry dike, forming the approach 16 feet wide on top, 516 feet long and a landing head of pile work understructure and open face crib-

work superstructure sheathed with tamarack. The timber structure incloses the outer end of the approach and extends 50 feet beyond, having a frontage of 111 feet and affording 225 lineal feet of dockage, including 50 lineal feet for shelter on the south side. The elevation of flooring is 13 feet above M.L.W.L. at which stage a minimum depth of 8 feet is available along the front. Water rises 12 feet. The whole structure is built strong to withstand the heavy pressure from the ice. A freight shed 12 by 24 has been erected on the dock.

Parliament having granted at its last session the sum of $1,000, for erecting a handrailing on the wharf, materials were procured, and in the fall of 1906, 50 per cent of the railing (total length, 1,000 L feet) was erected under difficulty, owing to scarcity of labour, high price of same, and continuous heavy traffic on wharf.

Expenditure during fiscal year 1906-7, $1,191.20.

HAMILTON.

Hamilton, a city in the county of Wentworth, is situated on the south shore of Burlington bay, at the western extremity of Lake Ontario, distant thirty-nine miles west of Toronto. It has extensive manufactures. Population, 65,000.

At the last session of parliament, the sum of $30,000 was appropriated for the construction of a wharf, and on April 20 last, a contract was awarded to Mr. A. A. McDonald, to construct same for the sum of $71,000.

The work consists in the construction of a revetment wall, 1,230 feet long, extending easterly from the Rogers wharf, at the foot of Catherine street, which has been purchased by the city of Hamilton. The wall is composed of a pile substructure, 20 feet in width, and a concrete superstructure, 10 feet wide on top. Work was commenced on June 27 and is still in progress.

Total expenditure, including dredging, for fiscal year 1906-7, $32,890.42.

HONORA.

Honora is a village on the north shore of Manitoulin Island, district of Algoma, distant thirteen miles from Little Current.

On August 25 last, authority was given to expend the sum of $225, for repairs to the foundations of warehouse.

Work was commenced on the 1st and completed on October 29, and consisted in the construction of a crib, 10 feet by 10 feet by 14 feet, under the northerly end of the warehouse, to replace pile foundation which had been damaged by an ice shove.

Total expenditure for fiscal year 1906-7, $211.66.

JORDON HARBOUR.

Jordan Harbour is situated on the southwest shore of Lake Ontario, six miles westerly from Port Dalhousie. It is composed of two parallel piers extending out into the lake, affording a good landing but no shelter from easterly gales. Large shipments of fruit are annually made from this place.

On July 27 last, authority was given to expend the sum of $75 for the completion of the stone filling in the piers of the bridge, and the placing of stone talus around same; on August 4, arrangements were made with Mr. H. Carson to do the work, which was completed on August 18 last.

Total expenditure for fiscal year 1906-7, $2,020.48.

KINCARDINE.

Kincardine is a prosperous town situated on the east shore of lake Huron, in the county of Bruce, thirty-nine miles south of Southampton and thirty-two miles north of Goderich. It is the terminus of the Wellington, Grey and Bruce division of the Grand Trunk Railway. Population about 3,000.

At the last session of parliament, the sum of $1,500 was appropriated for repairs to piers and dredging, and on August 4 last, authority was received to expend the sum of $1,000 for repairs to piers by day labour.

Work was commenced on September 3, 1906, and completed on March 29, 1907, and consisted in the renewal of a portion of decking and waling at outer end of south pier; the renewal of 213 feet of waling in inner harbour; the construction of 100 feet of backing to inner end of north pier, and a small amount of stone filling to south pier.

Total expenditure during the fiscal year 1906-7 is $1,488.96.

KINGSVILLE.

Kingsville is situated on the north shore of Lake Erie, in the county of Essex, about twenty-five miles east of the mouth of the Detroit river, and on the line of the Père Marquette Railway. Population about 1,600.

On July 25 last, authority was received to expend the sum of $375, by day labour, for urgent repairs to easterly pier and to the customs warehouse.

Work was commenced on the 6th and completed on August 25, 1906; it consisted of the renewing of the decking of 22 feet of easterly pier; renewal of six mooring posts, and general repairs to warehouse, including repainting roof of same.

Total expenditure, including dredging, for fiscal year 1906-7, $2,150.62.

LEAMINGTON.

Leamington is a prosperous village situated on the north shore of Lake Erie, in the County of Essex, about thirty-seven miles from the city of Windsor, on the lines of the Père Marquette and Michigan Central Railways. Population about 1,800. It is the centre of a thriving farming district. Large and numerous oil wells have been discovered in the vicinity of Leamington recently.

The telephone, mail and boat services are carried on with Pelee Island from this place.

On November 19, 1906, authority was received to expend the sum of $25 in removing 15 feet of sheet piling on easterly side of pier, at shore end, for the purpose of creating an opening to retard the extension of shore-line. This work was immediately performed.

Total expenditure during the fiscal year 1906-7, $25.

LITTLE CURRENT.

Little Current, a town of some 300 inhabitants, is situated on the east shore of Manitoulin island, on the north channel of Georgian bay.

On May 25, 1904, an agreement was entered into with Mr. C. S. Boone, to blast and dredge a channel about 1,400 feet long by 300 feet wide, with a depth of 22 feet below extreme low water.

Work was continued on July 1 and closed for the season on November 17. The dredge removed 47,453 cubic yards of rock.

Total expenditure for fiscal year 1906-7, $144,436.70.

MAGNETAWAN.

Magnetawan is a village on the Magnetawan river, sixteen miles northwest of Burks Falls, in the township of Chapman.

At the last session of parliament, the sum of $1,000 was appropriated for the construction of a wharf at that place.

Subsequently, the department decided to purchase the existing wharf property from Mr. D. B. Best, for the sum of $450.

The necessary plans and descriptions for the conveyances have been prepared and forwarded to the department, at Ottawa.

MALLORYTOWN.

Mallorytown is a small town on the main line of the Grand Trunk Railway, distant fourteen miles west of Brockville, in the county of Leeds.

At the last session of parliament, the sum of $1,500 was appropriated for repairs and additions to the landing pier, and on July 16, authority was given to proceed with the work by day labour.

Work was commenced on August 31, and completed on October 4; it consisted in raising the old portion of the wharf, about two feet at one corner, and renewing the superstructure where necessary; in constructing an 'L,' 24 feet long by 12 feet wide at outer end, and removing, by blasting, a rock in the approach to the wharf and levelling and grading same from the public highway.

Total expenditure for fiscal year 1906-7, $1,307.05.

MEAFORD.

Meaford is an incorporated town in the county of Grey, on the west side of the Georgian bay, twenty-one miles west of Collingwood and twenty miles east of Owen Sound. It is the terminus of the Northern Division of the Grand Trunk Railway. Population 2,500.

At the last session of parliament, the sum of $20,000 was appropriated for harbour improvements.

A contract was awarded to Mr. R. Weddel, of Trenton, to do the required dredging.

Work was commenced on August 23, and closed for the season on November 24. The dredge removed 38,032 cubic yards.

Total exepnditure for fiscal year 1906-7, $13,709.12.

MIDLAND.

Midland, Simcoe county, is the terminus of the Midland division of the Grand Trunk railway, on Georgian bay. Population, 4,500. Large quantities of lumber are shipped to and from this harbour and the railway company has two large grain elevators here, with a capacity of 2,000,000 bushels. There is also a large smelting works in operation.

At the last session of parliament, the sum of $50,000 was appropriated for harbour improvements.

On June 5 last, a contract was awarded to the Owen Sound Dredge and Construction Company, to dredge in front of the new Grand Trunk Railway elevator, along the face of their wharf and in the approaches to their elevator, to a depth of 25 feet below low water.

Five days dredging was also performed in the harbour proper, at the coal dock, by dredge *No. 9,* removing 2,540 cubic yards.

Work continued from July 1 and closed for the season on December 1, during which period the dredges *No. 9, Monarch* and *Excelsior* removed 149,264 cubic yards.

On August 2 last, authority was given to expend the sum of $600, in repairing the approach to the wharf, at the foot of King street, which work consisted in the renewal of the decking where necessary and the placing of new joists and caps in the approach for a length of 97½ feet.

Total expenditure for fiscal year 1906-7:—

Repairs to wharf	$ 533 86
Dredging	69,398 80
Total	$69,932 66

MITCHELL'S BAY.

Mitchell's Bay, in the county of Kent, situated at the northeasterly corner of Lake St. Clair, is about thirty-two miles by water and sixteen miles by rail from the city of Chatham. Principal industry is farming and fishing; large quantity of sugar beets are grown in the district and shipped out by scows over the bay and up the Chenal Ecarté river to Wallaceburg.

At the last session of parliament, the sum of $3,000 was appropriated for improvements, and on June 1, 1906, authority was given to enter into an agreement with the Chatham Dredging Company, of Chatham, for the dredging of a channel, about 1,400 feet long, leading to wharf, with an average width of about 40 feet and a depth of 6 feet below low water level.

Work was commenced on June 30 and completed on July 13, 1906; 7,036 cubic yards of clay and sand were excavated.

Total expenditure for fiscal year, $1,100.40.

MONETVILLE.

Monetville is a farming settlement situated in the township of Haddo, on the west arm of Lake Nipissing, some thirty-five miles from Sturgeon Falls.

In the autumn of 1903, a wharf 40 feet in length, with storehouse and shanty, was built to accommodate local traffic, at a cost of $578.17.

At its session of 1906, parliament granted $900 towards improvements to this wharf.

Accordingly, in August and September, 1906, an extension of 52 feet was built to the wharf, the storehouse, 30 by 17 feet, was moved down to the wharf and an extension, 22 by 17 feet, was built. A roadway was blasted through the rock bluff, the winter slip for all sleigh traffic. Some blasting was also done to improve the wharf approach.

The wharf, 7 feet high, is built on a rock ledge with a frontage of 92 feet, carrying 13 feet at low water.

Expenditure during the fiscal year 1906-7, $882.58.

McGREGOR'S CREEK.

McGregor's creek, in the county of Kent, flows through the southeasterly part of the city of Chatham and empties into the River Thames.

At the last session of parliament the sum of $3,000 was appropriated for the renewal of bank protection work, at the mouth of the creek, and July 17, 1906, authority was received to proceed with this work.

Subsequently an agreement was made for the driving of the necessary piling and placing of timber grillage on same; for the construction of a concrete revetment wall, and the driving of the anchor piles.

The sum of $1.25 was paid for the driving of each pile in substructure of wall, and $2.50 for each anchor pile; $110 for placing timber grillage on piling, for necessary excavating for tie rods and cutting off of old existing sheet piling. Piling, timber and iron supplied by the department.

Later an agreement was made for the construction of the concrete wall, at a rate of $6.50 per cubic yard, which included the placing of all necessary tie rods.

Operations were commenced on August 9, 1906, and were continued until December 27 following, when work ceased for the winter.

The work done consisted of the driving of a double row of piling, with timber grillage fastened to same, to serve as foundation for 172 feet of concrete retaining wall, 3 feet 6 inches wide at base and 2 feet 6 inches at top, and reaching from 1 foot below L.W.L. to a height of 8 feet 3 inches above L.W.L., wall being tied back by 1¼-inch iron tie rods fastened securely to anchor piles, driven 10 feet apart and about 25 feet in rear of wall. All the anchor and front piles were driven and 136 feet of

concrete wall completed, with tie rods, &c. On the remaining 36 feet of this work concrete footing blocks were placed.

The corporation of the city of Chatham undertook the providing and placing of necessary filling in rear of wall, and have already done a portion of this work.

Total expenditure during the fiscal year 1906-7, $2,466.13.

OLIPHANT.

Oliphant is a district or post office centre on Lake Huron, in the county of Bruce, and is eight miles distant from Wiarton. It is the principal point of communicaton between mainland and the adjacent fishing islands.

At the last session of parliament the sum of $600 was appropriated for the construction of an 'L' at the outer end of landing wharf, and authority was received on July 19 last to proceed with the work by day labour.

Operations were commenced on August 1, 1906, and completed on September 11 following.

The work performed consisted of the construction of 61 feet of close-faced cribwork, 15 feet wide and 8 feet high, filled with stone ballast, and floored with 3-inch planking; also some slight repairs, which left this whole work in good condition and of great service, principally to the summer residents in this district.

The total expenditure during the fiscal year is $598.77.

OTANABEE RIVER.

Otanabee river is an important waterway through the town of Peterborough and county of Peterborough emptying into Rice lake. It forms part of the Trent Valley canal system.

At the last session of parliament, the sum of $7,000 was appropriated for the completion of the dredging of a channel, 100 feet wide, about 2,100 feet long and 9 feet deep, southerly from Hunter street bridge, in Peterborough. On June 30, authority was given to proceed with the work.

The dredge *Trent* belonging to the Department of Railways and Canals, was employed to do the work, and the dredged material was deposited on the west side of the river, from whence it was taken by the municipality and used for filling in the depression between Simcoe and Charlotte streets. The dredge removed 16,588 cubic yards of clay and coarse gravel.

Total expenditure for fiscal year 1906-7, $6,999.58.

OWEN SOUND.

Owen Sound is situated at the mouth of the Sydenham river, which flows into the head of Owen sound, an arm of the Georgian bay, in the county of Grey.

It is the centre of an extensive agricultural district and the terminus of the Grand Trunk Railway branch of the Georgian Bay and Lake Erie division, also the Canadian Pacific Railway, Toronto, Grey and Bruce division. There are several lines of steamers running to and from Owen Sound. Population 10,000.

An agreement was entered into with Mr. A. F. Bowman to do certain dredging in the harbour at 11½ cents per cubic yard.

Work was commenced on July 1, and completed on November 24. The dredge removed 71,820 cubic yards.

Total expenditure for fiscal year 1906-7, $15,220.34.

PARRY SOUND.

Parry Sound is situated on the east shore of the Georgian bay, in the district of Parry Sound. Population, 3,000. The chief trade is in lumber.

At the last session of parliament, the sum of $2,500 was appropriated for renewing the cribwork protection work at the Two and Seven Mile Narrows, on the north shore of the Georgian bay; on August 15 last, authority was given to proceed with the work by day labour.

Work was commenced on September 1, and completed on October 31; it consisted in entirely rebuilding the cribwork protection on each side of the Two Mile Narrows and at the Seven Mile Narrows, all defective work was renewed and new timbers substituted where required. These protection works are for the purpose of preventing the large steamers, plying between Penetanguishene and Parry Sound, from striking the rocks on either side.

An appropriation of $1,500 was also made for the extension of the government wharf northerly, a distance of 170 feet by 16 feet wide, graded in the rear with earth and gravel; on August 30, authority was given to proceed with this work by day labour. Work was commenced on October 30 and completed on November 26.

Total expenditure for fiscal year 1906-7, $1,499.63.

PEMBROKE.

Pembroke, in the north riding of the county of Renfrew, is on the south shore of Allumette lake, which is part of the Ottawa river. It is an important station on the Canadian Pacific railway and of the Grand Trunk railway, 104 miles west of Ottawa. A steamer runs daily from Pembroke to Des Joachims, a distance of 45 miles. Population, 9,000.

On February 19, 1904, a contract was entered into for the construction of a wharf opposite the town, at the foot of Albert street.

The structure consists of pile bents, 20 feet wide and 1,342 feet long, forming the approach and a landing head of a total length of 550 feet, 50 feet wide, also of pile bents, with the outer face in 8 feet of water at low water level. The outer face of the part which is 50 feet wide is built with close sheet piles, the top of the wharf is 8 feet above low water level, except at the point where it crosses the Canadian Pacific railway trestle work, where it is 6 feet higher, with slopes both ways from that point. There are five landing slips at the outer end, and a combined freight shed and waiting room.

The work was commenced in the month of August, 1904, and completed in June, 1905.

During the fiscal year 1905-6, fenders were added to the landing faces of the wharf. In March, 1907, the handrailing was repaired at a cost of $72.50.

Expenditure during fiscal year 1906-7, $78.09.

PENETANGUISHENE.

Penetanguishene, in the county of Simcoe, is situated on the northwest peninsula in Georgian bay, formed between Nottawasaga bay and the waters of the Severn river, forty miles northwest of Barrie. It is the terminus of a branch of the Grand Trunk Railway.

At the last session of parliament, the sum of $1,000 was appropriated for repairs to the wharf, and on July 17 last, authority was given to expend this amount by day labour.

Work was commenced on May 14 and completed on June 30; it consisted in the renewal of the superstructure of the northerly portion of the esplanade, 200 feet in length by 18 feet in width.

An agreement was made with Mr. A. F. Bowman to perform the necessary dredging in the harbour, along the east side of the channel leading to the town wharf, at the rate of 12 cents per cubic yard. The dredge removed 94,500 cubic yards. This work was completed on October 13 last.

Total expenditure for fiscal year 1906-7:—

Dredging $13,500

POINT EDWARD.

Dredging.

Point Edward is situated at the head of and on the east side of the St. Clare river, in the county of Lambton, adjoining the town of Sarnia and is sixty-one miles west of London.

It is the principal port of call for the five steamers owned by the Northern Navigation Company, and which load and unload at the spacious Grand Trunk Railway Company's freight sheds.

A large amount of iron ore is brought into this port from West Superior and other upper lake ports. An extensive unloading plant now under construction will employ about fifty men continually unloading ore.

A large Grand Trunk Railway elevator at this point handles a considerable amount of grain every season.

It is the terminus of a branch of the Grand Trunk Railway, which company carries on a heavy business at this point.

Owing to the existing swift current, in the river, at this point, and the sandy nature of the bottom of Lake Huron, adjoining Point Edward, a large quantity of material is brought down and deposited annually, which necessitates considerable dredging in order to maintain channel to necessary width and depth.

At the last session of parliament the sum of $20,250 was appropriated for dredging at this point, and May 21, 1906, authority was given to proceed with the work ; contract for same having been previously let to the Dominion Dredging and Construction Company of Ottawa.

Dredging was commenced on May 19 and continued until August 15, 1906, when authority was received to continue dredging at this place until further orders. All urgent work required was completed on September 15, 1906, and dredging ceased.

The work performed consisted in the completing of a channel 250 feet wide along water front of docks, to a depth of 22 feet below L.W.L. Some 54,150 cubic yards of sand and gravel were excavated, at a total expenditure during the fiscal year 1906-7, including inspection, of $17,227.12.

PORT ARTHUR.

During the last fiscal year dredging was done at the south end of channel to Canadian Northern coal dock and Atikokan smelter works, and will be continued; all shallow places will be dredged to the depth of 22 feet.

Further dredging is required in channel to King's elevator, at north entrance to harbour, and in front of elevator wharf.

The total amount dredged, from July 1 to end of season 1906, was 443,175 cubic yards scow measurements, and the expenditure for the nine months ending March 31 last, $67,990.91.

FORT WILLIAM.

The entrance channel to the Kaministiquia river, following line of range lights, was deepened in places where the material had washed into the channel.

The new entrance channel, parallel to Empire elevator wharf, will require re-dredging in several places, as it is not down to depth called for in contract.

Dredging was done at different places in the Kaministiquia river where the water was not of sufficient depth, namely, opposite C.P.R. coal dock, flour shed, elevator E, McKellar dock, Murphy's coal dock, first bend above elevator D, Grand Trunk Pacific wharf, western elevator and Canadian Iron and Foundry Company's wharf. In addition, the strip of land in front of the new C.P.R. freight shed, near McKellar's creek, was dredged away. Dredging also was done at the turning basin, at the Mission river.

The soundings in the Kaministiquia river were taken to the north limit of the town of Fort William, one mile above the C.N.R. coal docks.

MISSION RIVER.

Work was done at the entrance channel to the Mission river; the dredging is still within 1,700 feet of the shore line, and as soon as the ice leaves the bay, a dredge will continue this channel.

The total amount dredged from July 1 to end of season in entrance channels to Kaministiquia and Mission rivers, as well as in the river, was 1,765,825 cubic yards, scow measurement.

MAGNET CHANNEL.

Some boulders were removed from this channel and buoys placed to mark the channel, at a cost of $833.91.

PORT BRUCE.

Port Bruce is situated at the mouth of Catfish creek, in the county of Elgin, on the north shore of Lake Erie, and about five miles south of Aylmer. Population about 100. Principal industry is fishing, in the pursuance of which it ranks as an important point.

At the last session of parliament the sum of $5.000 was appropriated for repairs to piers and dredging, and on July 25, 1906, authority was given to proceed with the work.

A contract was made to perform the necessary dredging. Operations started on July 26 and continued until August 9, 1906, during which time some 8,488 cubic yards of sand and gravel were excavated, in removing a bar which had formed across entrance to piers, thereby completely blocking either ingress or egress.

Repairs to piers, by day labour, were commenced on August 1, and continued until March 30, 1907, when appropriation was exhausted.

The work performed consisted in the construction of 90 feet of an extension to outer end of westerly pier, 20 feet wide, and reaching to a level of 5 feet above L.W.L.; stone filling required was only partially completed; some minor repairs were also made to easterly pier.

The total expenditure on these works during the fiscal year 1906-7 was as follows :

Dredging, including inspection	$2,122 00
Repairs to piers	2,877 83

PORT COLBORNE.

Port Colborne is situated on the north shore of Lake Erie, in the county of Welland, about twenty miles west of the city of Buffalo.

It is the terminus, on Lake Erie, of the Welland canal, and, as such, is a point of great importance, in connection with the transportation of grain and other freight from the west to the St. Lawrence ports.

In 1891, the work of improving the harbour of Port Colborne was decided upon, and for this purpose the Department of Railways and Canals was entrusted with the construction of docks, elevators and other terminal facilities, and the Department of Public Works with the construction of two breakwaters required for the protection against storms of the commercial docks.

The first, or western breakwater, was completed in the autumn of 1904. Its total length is 4,424 feet ; the outer 2,400 feet being 50 feet in width and the remainder 25 feet in width ; the height of the break is 11 feet above low water.

This structure is built of timber cribwork, but the covering is concrete, varying in thickness from 1 to 1½ feet. At the outer end a block, 100 feet long by 60 feet wide,

and 13 feet above low water, carries a concrete lighthouse, built by the Department of Marine and Fisheries.

Along the south or exposed face is deposited a stone embankment reaching to a height above water, which varies now from 1 to 10 feet, but which will ultimately be made uniform to the latter height.

The second or eastern breakwater, is located at the entrance to the harbour and canal, the gap between the two breakwaters being 625 feet.

The structure is 2,460 feet in length and 35 feet in width, built of timber cribwork to within 1 foot of low water mark, with a concrete cribwork superstructure well filled with stone ballast, the break being 11 feet above low water mark.

This second breakwater was completed in June, 1906. During the fiscal year 1906-7, viz., from July 1, 1906, to April 1, 1907, the work done in Port Colborne consisted in building up the stone embankment along the south face of the western breakwater to the intended height of 10 feet above low water mark, and towards that end, 5,391 cubic yards of small stone, 4,375 cubic yards of large stone, were placed in that embankment, at a cost of $18,801.10, as follows :—

5,391 c. yds. small stone at 85 cents per c. yd.	$ 4,582 35
4,375 c. yds. large stone at $3.25 per. c. yd.	14,218 75
	$18,801 10

To complete the embankment, which is a much required protection against damage by storm, it will be necessary to spend an additional sum of $35,000, made as follows :—

5,000 c. yds. small stone at $1 per c. yd.	$ 5,000
5,000 c. yds. concrete blocks at $6 per c. yd.	30,000
	$35,000

Total expenditure in 1906-7, $22,653.73.

PORT DOVER.

Port Dover is situated on the north shore of Lake Erie, about forty miles south of Woodstock and fifty miles west of Port Colborne. It is a terminus of a branch of the Grand Trunk Railway, and is a favourite summer resort. Population about 1,200.

On November 28, authority was received to expend, by day labour, the sum of $400 to repair damage done by storm to outer end of westerly pier. Material was immediately ordered and work was performed between January 2 and 14, 1907.

The work done consisted in the reconstruction of about 8 feet of the outer end of pier, from L.W.L., and filling of same with stone.

On the completion of this work a statement covering expenditure was submitted, as same was to be charged against Department of Marine and Fisheries.

Total expenditure during the fiscal year 1906-7, is $640.93.

PORT ELGIN.

Port Elgin is a harbour of refuge, situated on the east shore of Lake Huron, in the county of Bruce, five miles south of Southampton, fifty-six miles north of Kincardine. It is on the Wingham, Grey and Bruce division of the Grand Trunk Railway. Population about 1,600.

It is a port of call for the local steamers, and the principal export is lumber, tanbark and cordwood. The Grand Trunk Railway have constructed a spur line from station to pier.

On June 1, 1906, authority was given to perform urgent dredging required in this harbour to afford safe entrance to and landing at commercial dock. An agree-

ment was entered into with the Marlton Dredging Co., of Goderich, for the performance of this work.

Operations were commenced on June 30, and were completed on July 16, 1906, during which period some 10,540 cubic yards, scow measurement, were excavated, at a cost of, including inspection, $3,199.50.

PORT HOPE.

Port Hope is situated on the north shore of Lake Ontario, in the county of Durham, sixty-three miles east of Toronto, on the Grand Trunk Railway. The chief trade is lumber and grain.

At the last session of parliament the sum of $3,000 was appropriated for repairs to piers, and on July 21 last, authority was given to proceed with the work by day labour.

Work was commenced on July 1 and completed on December 31; it consisted in repairing 180 feet of the west pier and 256 feet of the east pier, south of the warehouse, and rebuilding 178 feet of the wharf in the inner basin of the old harbour.

Total expenditure for fiscal year 1906-7, $3,259.49.

PORT STANLEY.

Port Stanley is an important harbour of refuge, situated on the north shore of Lake Erie, at the mouth of Kettle creek, in the county of Elgin, eight and a half miles by rail south of the city of St. Thomas, and twenty-three and a half miles south of the city of London. It is the terminus of the Pere Marquette Railway and of the Southwestern Traction Company Electric Railway.

A coal ferry, owned by the Lake Erie Coal Company, of Walkerville, carrying thirty cars, of 100,000 lbs. capacity plies between this port and Conneaut, Ohio, making on an average two round trips every thirty hours. Between January 1 and December 31, 1906, some 368,602 tons of coal, 56,201 tons of steel and 8,944 tons of miscellaneous freight was brought by this coal ferry into the port. Other imports, consisting of wheat, lumber, cedar posts and general merchandise were also brought into this port; as a revenue harbour it is thus of considerable importance. The principal industry is fishing. Some eight tugs, and other small craft being engaged in this occupation.

It is a favourite summer resort. Population about 750.

It is a regular port-of-call for the Merchants' line of steamers from Montreal, and for the Cleveland and Port Stanley line.

The construction of a grain elevator, by the John Campbell Company, Limited, of St. Thomas, for the purpose of bringing grain direct from Fort William, increases the necessity for keeping this harbour and its entrance dredged to a sufficient depth to accommodate deep draught vessels.

At the last session of parliament the sum of $60,000 was appropriated for harbour improvements, and on July 17, 1906, authority was received to expend, by day labour, the sum of $1,000 for general repairs to piers, which amount was subsequently increased by an additional $6,750 to provide sheet pile protection work to about 250 feet of face of westerly pier, which had settled badly towards creek.

The above work was commenced on September 1, and was still in progress at the end of the fiscal year.

The work performed consisted of the renewal of 50 feet of decking at the outer end of easterly pier; repairing damage done to outer end of pier, and protecting it with iron corner plates; also the renewal of snubbing posts; some stone filling and other minor repairs to this pier. Repairing 50 feet of outer end of westerly pier; tearing down and rebuilding of 154 feet in inner harbour, and protecting face of same with 8-inch by 8-inch by 28 foot pine sheet piling, which was securely fastened back by heavy tie-rods to anchor piles, driven 15 feet in rear of dock and 10 feet apart; about a week's work was also performed on about an additional 80 feet, preparatory to protecting its face with sheet piling similar to that already described.

Dredging.—On May 17, 1906, a contract was made with Messrs. Manely & Co., of Toronto, for the performance of necessary dredging.

Work was in progress at the beginning of the fiscal year and continued until October 20, 1906, during which time, some 45,082 cubic yards of clay and sand were excavated.

The dredging performed consisted in the excavating of a channel, 950 feet long and 100 feet wide at outer entrance to piers, to a depth of 20 feet below L.W.L.; dredging in inner harbour to a depth of 18 feet below L.W.L.; also a few days dredging in the Lake Erie Coal Company's slip and at outer entrance to same.

On July 20, 1905, a contract was let to the Pacific Construction Company, of Ottawa, for the construction of two breakwaters, each 500 feet long.

In April, 1906, this contract was transferred to Messrs. Haney & Miller, of Toronto, the amount of contract being $105,828.

Operations were commenced on August 7, 1906, and continued about November 1, 1906, when work was closed down for the winter, during which time two cribs, 100 feet long, 35 feet wide, and 17 feet deep, were constructed. All the timber and iron required for the completion of the substructure in this work are on hand, as well as an extensive plant for the further prosecution of the work in a expeditious manner.

The progress made on this work during the last fiscal year was not satisfactory, which the contractors attributed to great difficulty in securing suitable labour and prompt delivery of material.

The expenditure on these works, during the fiscal year 1906-7, was as follows:—

Repairs to piers	$ 6,068 95
Dredging, including inspection	6,560 84
Breakwater, including inspection	31,613 65
	$44,243 44

RIVER THAMES (MOUTH).

Dredging.

A dredged channel, approximately 7,000 feet long and 100 feet wide, has to be maintained across the bar at easterly end of Lake St. Clair, to permit of safe entrance of boats to the River Thames. Owing to the material being principally fine sand and to the exposed position of this channel, considerable filling in occurs.

In May, 1906, a contract was let to Mr. C. S. Boone, of Toronto, for the cleaning out of this channel.

Operations were commenced on September 13, and continued until November 22, 1906, when work closed down for the winter; during that time 59,018 cubic yards of clay and sand were excavated, in the partial dredging of this channel to a depth of 13 feet below low water level.

ROACHE'S POINT.

Roach's Point is a small summer resort on the west shore of Cook's bay, an arm of Lake Simcoe, in the county of York.

At the last session of parliament, the sum $3,200 was appropriated for the construction of a wharf and on October 20 authority was given to proceed with the work by day labour.

The work, commenced on January 29, is not yet completed. It consists in the construction of a wharf, 255 feet long by 20 feet wide, composed of stone approach, 155 feet long by 20 feet wide, extending out to a timber wharf composed of cribs and spaces, 100 feet long by 20 feet wide.

Total expenditure for fiscal year 1906-7, $2,052.88.

RONDEAU.

Rondeau is an important harbour of refuge, situated on Pointe aux Pins, about nineteen miles south of Chatham and forty-five miles west of Port Stanley. It is a favourite summer resort and the terminus of the Sarnia and Rondeau branch of the Père Marquette Railway.

In the inner harbour and at westerly side along coal dock, a modern and extensive coal handling plant is used by the Lake Erie Coal Company, for unloading coal from their boat, which runs regularly between this port and Conneaut, Ohio. One hundred round trips were made by this boat during the season of 1906; the capacity is 1,600 tons, in bulk, but frequently, lighter loads have to be carried owing to sand bars which form at outer entrance to channel during heavy storms from the southwest. This difficulty, however, will be largely overcome by the construction of breakwater pier now under contract.

The duty collected during the last fiscal year on coal brought into this port amounted to $66,411, thus showing its importance as a revenue port.

It is the headquarters of the 'Post Fishing Company,' of Sandusky, Ohio, who have two steam tugs working out of this harbour, and which export a large quantity of fish annually.

It is a port of call, during the summer season, for the passenger steamer *City of Grand Rapids*, running to Cleveland.

At the last session of parliament, the sum of $60,000 was appropriated for harbour improvements.

In May, 1906, a contract was let to Mr. C. S. Boone, of Toronto, for the necessary dredging; work was in progress at the beginning of the fiscal year and continued until September 4, 1906.

The work consisted in the opening up of a channel at entrance to harbour, to a depth of 20 feet below L.W.L.; dredging between piers to 18 feet below L.W.L., and a few days dredging in removing obstructions in the Lake Erie Coal Company's slip. In the execution of this work some 40,393 cubic yards of clay and sand were removed.

On July 17, 1906, authority wsa received to spend, by day labour, the sum of $4,500 on repairs to piers. Operations were commenced on August 8, 1906, and continued until March 16, 1907. The work performed consisted of the driving and fastening of 82 running feet of double sheet pile protection work, at outer face of westerly pier, which completed the work of protecting this face throughout with sheet piling, for the purpose of preventing the sand from drifting through pier into channel; twelve clusters of white oak spring piles, 40 feet long, and three piles in each cluster, were driven along the face of westerly pier, to prevent further damage being done by boats entering this harbour. These clusters of piles were securely wrapped with wire cable. The swift current running at times between these piers render boats liable, particularly at night, to sheer against pier. General repairs were also made to inner and outer end of westerly pier, and waling renewed along portion of inner face of same. There now remains on hand considerable material which will be utilized towards the completion of renewals and repairs during the coming fiscal year.

On July 14, 1905, contract was let for the construction of 1,000 feet of breakwater at outer entrance to harbour, at the price of $110,000.

On April 6, 1906, this contract was transferred, but, to date, work has not yet been commenced, nor has any material been delivered on the ground. The contractors attribute delay in starting this work to the congestion of railroad traffic in the west, which has delayed delivery of timber required to commence operations.

The total expenditure on these works during the fiscal year, 1906-7, is as follows:—

Dredging, including inspection	$5,609 82
Repairs to piers	4,500 00

SARNIA.

Dredging.

Sarnia is situated on the east bank of the St. Clair river, in the county of Lambton, about three miles south of Lake Huron, and fifty-nine miles by rail from London.

There are two lines of the Grand Trunk Railway, and one of the Père Marquette entering the town. Population about 8,000. It is a port-of-call for a number of lines of steamers and is an important shipping point.

On June 2, 1906, authority was given to expend the sum of $234 on a few days' dredging, required opposite the Imperial Oil Company's dock, and on July 9, following, further authority was received for the expenditure of $3,000 for dredging required in front of and between the Sarnia Bay Lumber Company, and the Cleveland-Sarnia Saw-mill Company's dock, to a depth of 15 feet below L.W.L. in order to permit the entrance of large rafts from the river.

An agreement was made with the Sarnia Bay, Lumber, Timber & Salt Company, of Sarnia, for the performance of this work.

Work was performed between July 4 and August 11, 1906, during which time some 16,900 cubic yards of clay and sand were removed.

The total expenditure during the fiscal year 1906-7, including inspection, amounted to $2,979.04.

SAUGEEN RIVER.

Saugeen river empties into Lake Huron at a point about thirty-two miles from Walkerton and about forty-three miles from Sarnia. At the mouth of this river is situated the thriving town of Southampton.

At the last session of parliament, the sum of $5,000 was appropriated for improvements at mouth of this river, and on November 22, 1906, authority was received to expend, by day labour, the sum of $475 on urgent repairs and renewals to docks.

Operations were commenced on November 14 and completed on December 31, 1906.

The work performed consisted of the general repairs to 50 feet of north pier which had been damaged by ice; the driving of six anchor piles in rear of sheet piling on south pier, for the purpose of tying back about 52 feet of this sheet piling; filling behind same and covering with plank until spring; and the construction of a two-foot raise to 106 feet of outer face timber of south dock.

The total expenditure on these works during the fiscal year 1906-7 is $4,997.44.

SAULT STE. MARIE.

Sault Ste. Marie, district of Algoma, is situated at the head of St. Mary's river, which connects lakes Superior and Huron.

At the last session of parliament, the sum of $5,000 was appropriated for wharf improvements.

On November 10, 1905, an agreement was made to construct a warehouse on the government wharf, for the sum of $7,905. Works were continued from July 1 and completed on October 26, and consisted in the construction of a warehouse, the main portion of which is 280 feet by 30 feet, with an 'L,' 21 feet by 72 feet.

Certain repairs were absolutely necessary to the main portion of the old wharf and the approach thereto, consisting of entirely redecking the approach, which is 24 feet by 230 feet, also the redecking the main thoroughfare, 30 feet by 225 feet, across the old wharf.

There has been installed in the new warehouse, electric light and water service at a cost of $283.17.

Total expenditure for fiscal year 1906-7, $6,322.66.

SEVERN RIVER.

Severn river (McDonald's chute) is situated not far below Sparrow lake, and consists of a narrow gorge on the main branch of the Severn river.

Washago is situated on the Severn river about half a mile from Lake Couchiching, and is a station on the Grand Trunk Railway between Toronto and North Bay.

At the last session of parliament the sum of $3,500 was appropriated for works on the Severn river, as follows :—$2,300 for the construction of a stop-log dam at McDonald's chute, No. 1, and $1,200 for works of blasting at stop-log dam No. 1 at Washago. The department decided, however, not to construct the stop-log dam at McDonald's chute but to expend the sum of $1,500 for blasting and removing rock at this place, and on September 28, authority was given to expend the amount by day labour.

An appropriation of $400 was also made at the last session of parliament, for deepening over the rocky shoal at Washago, near the outlet of Lake Couchiching, and on July 17, authority was given to expend this amount by day labour.

The work at McDonald's chute, No. 1, consists in the blasting out of rock to provide an increased depth and width of the natural waterway above and below the stop-log dam No. 1, Little falls, and increasing the length of the dam 8 feet. The $400 was expended in removing the rocky shoal in the Severn river, at the outlet of Lake Couchiching, in order to afford navigation up to the Canadian Northern railway bridge.

Total expenditure for fiscal year, 1906-7 :—

McDonald's chute	$1,098 59
Washago	1,451 04
Total	$2,549 63

SHEGUINDAH.

Sheguindah is a hamlet on Manitoulin island, fourteen miles southeast from Little Current. It is a port of call for local boats plying between Collingwood and Sault Ste. Marie. Population 100.

On August 16 last, authority was given to expend the sum of $300 in repairs to the wharf, and on September 25, authority was given to expend the sum of $75 in partitioning warehouse.

Work was commenced on October 1 and completed on January 31; it consisted in replacing broken timbers and piles, where necessary, which had been wrecked by ice-shoves.

Total expenditure for fiscal year 1906-7, $374.91.

SILVERWATER.

Silverwater is a small place situated on Bayfield Sound, on the north shore of Manitoulin island.

At the last session of parliament, the sum of $3,500 was appropriated for the completion of the wharf at this place, out of this amount the sum of $800 was to be used for the construction of a warehouse on the wharf. On July 21, authority was given to proceed with the work by day labour.

Work was commenced on August 6 and completed on October 13; it consisted in the construction of a wharf, composed of a stone approach, 20 feet in width on top by 80 feet in length, connecting the shore with a timber wharf of cribs and spans, 100 feet by 20 feet, and an 'L,' 80 feet by 20 feet.

The warehouse stands in the angle made by the wharf and 'L,' and is 18 feet by 45 feet on cribwork foundation.

Total expenditure for fiscal year 1906-7, $3,640.47.

SOUTHAMPTON.

Southampton is a prosperous town situated at the mouth of Saugeen river, in the county of Bruce, and on the east shore of Lake Huron, thirty-two miles from Walkerton, the county town; it is a terminus of the Grand Trunk railway and a harbour of refuge and port of call for steamers of the Algoma Steamship Line. Population about 2,000.

On November 2, 1906, authority was received to expend by day labour the sum of $400 in urgent repairs to breakwaters, which reach from shoreline to Chantry island.

Work was commenced on November 6, 1906, and ceased on March 29, 1907, and consisted in renewing portions of decking and walls of breakwaters, where serious breaches in work were threatened owing to decay and damage done by storm.

The total expenditure on these works during the fiscal year 1906-7 is $114.45.

ST. JOSEPH.

St. Joseph is situated on the east shore of Lake Huron, in the county of Huron, about fourteen miles south of Goderich. Population, about 50.

During session of parliament, in 1902, the sum of $5,000 was appropriated towards the building of a wharf at this point.

The wharf was partly constructed by day labour, when a contract was let in 1903, for the completion of same, for the sum of $3,950.

Work was in progress at the beginning of the fiscal year and was continued until August 13, 1906, on which date the cribs and continuous superstructure to wharf was practically completed. The approach, however, was only partially completed.

That portion of approach built has suffered frequently from erosion, caused by severe storms, and owing to the exposed position of this locality. It has been shown that large stone only can be successfully used in the completion of this wharf.

Total expenditure during the fiscal year 1906-7, $252.50.

THESSALON.

Thessalon is situated on the north shore of the north channel of Lake Huron, in the district of Algoma, fifty miles east of the 'Soo.' Considerable lumber is shipped from this place.

Certain urgent repairs were required to be made to the centre crib forming part of the warehouse foundation; this had to be raised and the building levelled by jack screws.

TORONTO.

Toronto harbour is situated on the north shore of Lake Ontario; it is formed by a circular bay one and a half miles in diameter, separated from the lake by a large island (formerly a peninsula), about six miles long, making a safe, well-sheltered harbour, capable of containing a large number of vessels.

At the last session of parliament, the sum of $25,000 was appropriated for improvements at the eastern entrance.

Work was commenced on July 1, and consisted in general repairs to the east pier of the eastern channel, the renewal of a number of broken rods and a thorough overhauling of the plant, such as scows, &c.

On May 11 last, an agreement was made with Messrs. Haney and Miller to remove 35,000 cubic yards of material from the eastern gap, at 15 cents per cubic yard. Work commenced on the 22nd and completed on December 8. The dredge removed 31,794 cubic yards.

The government dredge *Montague* also worked in the approaches of the eastern gap, and from July 1 till July 31, removed 5,110 cubic yards.

The government dredge *Northumberland* begun work at the eastern gap on September 4, and closed for the season on December 6. During this period she was greatly delayed by stormy weather, and in October only worked 66 hours. She, however, approximately removed 35,000 cubic yards from the channel and approach, making a cut, through the bar, some 350 feet wide with a governing depth of 16½ feet.

On September 5, 1905, a contract was awarded to construct an extension to the island breakwater, 1,500 feet in length, but up to date, this work has not been commenced.

Total expenditure for fiscal year 1906-7, $13,672.72.

THAMES RIVER WHARF AT LIGHTHOUSE.

At the last session of parliament, the sum of $3,300 was appropriated for the completion of this wharf at Jeanette's creek, and on June 23, 1906, authority was received to expend this grant, by day labour.

Operations were resumed on July 1, and continued until October 31, 1906, when work ceased owing to the appropriation being exhausted. During that time work performed consisted of the completion of the driving of pile foundation, with timber grillage, to act as substructure for concrete retaining wall; the concrete footing blocks were all placed, and anchor piles driven at 10 feet intervals in rear of wall, securely fastened to front piles by heavy iron tie-rods.

This work has a frontage of 180 feet, with two returns of 20 feet each; portion of filling in rear of piling has been done.

The total expenditure on this work during the fiscal year 1906-7 is $3,603.27.

TREADWELL.

Treadwell is a post village in Prescott county, on the south shore of the River Ottawa, four miles north of Plantagenet, and forty-one miles east of Ottawa.

The old Cane and Brown wharfs in this locality, private property, being in a very dilapidated condition, and the proprietors reluctant to undertake the extensive repairs found necessary to accommodate the heavy traffic from Plantagenet and surrounding parishes, the government decided in the spring of 1905, to build a new wharf in this locality. To this effect Brown's wharf, including a 30 feet wide and 250 feet long right of way thereto, was bought and transferred to the Crown for the sum of $600. Construction was begun in May of the same year.

The structure consists of a headlock, 33 feet wide and 116 feet long at top, formed by a double row of close-faced and stone filled cribs, 133 feet 6 inches long, 10 feet wide and 17 feet clear apart, standing 1 foot above low water, the outside face of outer crib being sunk in 9 feet 6 inches of water. On each row rests a superstructure, 10½ feet high, with an ice-breaker of granolithic concrete, mixed 1-3-5. The outer wall has a width of 6 feet 1½ inches at bottom and 1 foot 9 inches at top, the outside face being inclined 1 in 12 and the inside face 1 in 3. The inner wall is 5 feet and 1 foot 9 inches wide at bottom and top respectively and has faces inclined 1 in 12 and 1 in 5. The front wall is reinforced every 10 feet by 1½-inch vertical iron bars, with plates, inserted in the concrete near the outer face. The top of said wall is anchored with the bottom of rear wall by four 1½-inch iron bars 32 feet long. A double slip, each 10 feet wide and at elevations of 3½ and 7 feet from low water, were made in the face. The 3-inch pine flooring rests on a steel structure composed of 24, 20 and 18-inch I-beams with 8-inch connections distanced 3½ feet. The approach, 123½ feet long, is of stone 18 feet wide at top with sides of large rubble stones inclined 1 in 7.

Materials consisting in stone, lumber, sand, iron bars and steel span, were bought and work commenced in May, 1905. At the end of June following, about four-fifths of the stone approach were completed with an expenditure of $5,074.76.

In July and August of the same year, the cribs were built and sunk in place. The conerete superstructure was commenced in September and completed at the end of November, making an expenditure during 1905-6 of $3,599.63.

The structure was finally completed in August, 1906, at a further cost of $2,704.92.

WAUBAUSHENE.

Waubaushene and Fesserton are situated on the south shore of the Georgian bay, at the south end of same.

At the last session of parliament, the sum of $12,000 was appropriated for the dredging of a channel in Matchedash bay, from Waubaushene to Fesserton.

On July 5 last, a contract was let to the Owen Sound Dredge and Construction Co. to do the necessary dredging.

Work was commeneed on June 28, and closed for the season on November 17, during which time the dredge removed 90,570 cubic yards.

Total expenditure for fiscal year 1906-7, $11,253.04.

WENDOVER.

Wendover, in the county of Prescott, is situated on the south shore of River Ottawa, about eight miles from Plantagenet on the Canadian Pacific Railway.

The construction of a wharf at this place was commenced by day labour in September, 1901. The structure consists of the following :—

1. A stone embankment of a length of 160 feet from the shore by a width of 18 feet at top, with sides sloped 1 in 1, and a height of 12 feet.

2. A trestle or pile approach of a length of 342 feet from former to headblock, by a width of 18 feet for 294 feet and a width of 60 feet for the remaining 48 feet adjacent to the headblock.

3. A pile headblock at an angle of 82 degrees and 30 minutes with the approach, of a length of 71 feet by a width of 32 feet, with a close-faced eribwork iee-breaker, 37 by 24 feet at its upstream end.

The wharf at its outer face has a height of 30 feet, stands in 10 feet at low water and is 3 feet above high water level. There is a floor, 34 feet long by the width of the wharf adjacent to the ice-breaker and 8 feet above low water level, with a slip, 38 feet long and 11 feet wide, sloping 1 in 5. A storehouse and waiting room, 20 by 36 feet, is erected on the approach near the eastern side of slip. Three clusters of piles, 30 in each and well bolted together, are placed at equal distances between wharf and shore, about 200 feet upstream of structure, to protect it against the ice. The wharf, though not completed, was opened to traffic in June, 1902. Expenditure, 1901-2, $6,502.22.

During the fiscal 1902-3, the sum of $3,083.17 was expended in building the pile ice-breaker and one of the clusters of piles mentioned above, in bracing the pile approach and in raising the stone embankment.

The wharf was completed at the end of fiscal year 1903-4, a further sum of $1,097.48 being expended. The bracing of the approach was reinforced, the top of the hill leading to the wharf lowered and the stone embankment finished.

In 1904-5, slight damages to the piles by the ice, called for repairs amounting to $119.62.

During the ice shove of 1906, one of the ice-piers was broken up. A close-faced cribwork ice-breaker measuring 30 feet 5 inches by 19 feet 5 inches at bottom, 7 feet by 15 feet at top, with all sides inclined 1 in 12, except the upstream face which is inclined 1½ in 1, and 16 feet 8 inches high, was substituted. Minor repairs to the wharf proper and to the shed were also made. Expenditure in 1906-7, $1,956.33.

WIARTON.

Wiarton is a prosperous town in the county of Bruce, at the head of Colpoy's bay, about thirty-two miles northwest of Owen Sound. It is the terminus of the

Georgian bay and Lake Erie branch of the Grand Trunk Railway. Population about 3,000.

At the last session of parliament the sum of $5,500 was appropriated for the renewal of the superstructure of breakwater pier, and on July 19, 1906, authority was given to expend, by day labour, the sum of $1,500, which amount was subsequently increased by $4,000.

Operations were commenced on August 14 and continued until December 14, 1906, when work closed down for the winter, good progress having been made. Some 290 feet of old superstructure were torn down to 2 feet below L.W.L.; two 10 by 10-inch timbers were then securely fastened to substructure, and on which were placed concrete footing blocks 2 feet 6 inches wide and reaching to low water level. Monolith concrete walls were then constructed 2 feet 6 inches wide at base and 1 foot 6 inches at top, reaching to height of 4 feet 6 inches above L.W.L.

It is the intention to add another 6 inches to this wall, making the height eventually 5 feet above L.W.L. These walls were tied back by 1¼-inch iron tie-rods, placed at 20-foot intervals, stone filling was then levelled up in rear of wall, and surface of stone covered with gravel.

The total expenditure during the fiscal year 1906-7 is $2,907.70.

PROVINCE OF MANITOBA.

MANITOU RAPIDS, WINNIPEG RIVER.

The shoals and obstructions to navigation, at the mouth of the Winnipeg river, were marked out and buoyed, early in the season, and facilitated considerably navigation to Fort Alexander. Arrangements were made for the removal of these buoys at the close of navigation and the replacing of them in the spring.

THE NARROWS, LAKE MANITOBA.

The shoals existing at the Narrows, Lake Manitoba, have been found to be a serious menace to navigation.

There is no existing chart of Lake Manitoba and it would seem advisable to have a hydrographic survey of this lake made, with the information gained properly charted and a few lighthouses established. Arrangements have been made whereby this department maintains the buoying of the channel at the Narrows.

SELKIRK.

During the months of January, February and March the extension of the Selkirk wharf was proceeded with and completed. This extension is 222 in length and fills in the gap left between the two former wharfs, giving a continuous frontage now of 952 feet.

The construction consists of pile bents spaced 4-foot centres and close sheath-piling in front, the whole being filled with stone. The cost of this work has been $3,784.85 or $17.05 per lineal foot of frontage.

Of the above sum $480.20 represents the cost of round piling which were already on the ground and charged up against a former appropriation for this work, making a total charge against this work for the past year, $3,304.55. Some earth filling behind the new extension remains to be done.

During the past season a survey of the river frontage was made, and an agreement drawn up with the Dominion Fish Company whereby the latter convey a strip of land opposite the present wharf extension free of consideration.

ST. ANDREW'S RAPIDS LOCK AND DAM.

At an early period during the last year it was decided upon to resume the construction of the St. Andrew's lock and dam, and for this purpose new plans and specifications were prepared.

Changes in the general form and dimensions of the permanent and movable dam were necessitated, owing to the increase of the high water level observed during the 1904 freshet.

Modifications and changes in the general design of the lock and entrance piers were also effected. The above changes have not affected the usefulness of the work done under the former contract.

The plans and specifications were completed on August 1, tenders immediately advertised and called for on September 10.

The contract for this work was awarded on October 11, 1906.

Previous to the awarding of this contract, it was thought advisable to have some work done by day labour, a force of men and teams was put on raising banks at lower end of lock pit, gathering plant and material left by former contractors, and unwatering the lock pit. This work was started on August 14, and discontinued on October 24. The expenditure on this work was $5,049.06.

Since taking over this work, on October 23, 1906, the contractors have devoted their energy to a preparation for an early start on actual construction of the lock, and at the date of writing have everything in readiness.

During the winter and spring, a total quantity of 11,200 cubic yards of sand and gravel was hauled to the site of the works, and 2,100 cubic yards of earth was removed from the lock pit. A small quantity of rock was also removed from the lock pit. Work was also done on the building of a cement shed, overhauling and repairing cableway and erecting mixing plant.

During the past winter, valuable information has been obtained in connection with the St. Andrews work in particular, and the Red river generally. A complete hydrographic survey of the river, from St. Andrews to Selkirk, has been made, giving depths of water and elevations of rock surface obtained with Perce test boring machine. Levels have been carried up the river, as far as Winnipeg, and down the river to Selkirk, and series of permanent bench marks and water gauges have been established. It is the intention to connect all the gauges on Lake Winnipeg, Red and Assiniboine rivers, and refer same to one datum plane. A gauging station has also been established on the river, above the site of the work, and the necessary data is being obtained for the determining of the discharge curve of the river.

NORTHWEST TERRITORIES.

CRAVEN DAM.

The work of reconstructing the Craven Dam, in order to regulate the flow of Last Mountain lake, has been proceeded with. A great deal of damage had been done, particularly on the north side where part of the side hill had been washed away, also the middle part of the dam, where a small island existed. It was found that by using as much of the old dam material as possible, the work of reconstruction could be done at a lower figure by rebuilding below the small island.

It is composed of seventeen pile bents; each bent, excepting the outside one, contains five piles. The whole front of the dam, to high water mark on both sides of same, was double sheath piled with 4-inch tongue and groove sheath piling. The dam was covered over with 4-inch fir material, and a fish slide built on the south side of the south waste weir. The elevation of the old dam was maintained, but an overhead service bridge was built, intended to be used in connection with stop logs that might be put in, if it is thought advisable to raise the level of the water to a higher elevation than the present one.

I might say that owing to the courtesy of Mr. F. G. Robinson, Deputy Minister of Public Works, province of Saskatchewan, a great saving was effected in the prosecution of this work, in being allowed to use one of their pile drivers, fully equipped, as well as the foreman and gang of men who had been employed at such work all summer.

The expenses incurred during the last fiscal year amounted to $2,482.31.

NORTH SASKATCHEWAN (PRINCE ALBERT).

The work of removing boulders from the bed of the North Saskatchewan at Prince Albert was started. It was thought advisable to equip a derrick that could be used either on the ice or a scow for the purpose aforesaid. The derrick material, boulder tongs, &c., were also ordered and delivered; the mast, stiff legs and boom were framed in readiness to be put together. No actual work was, however, done, owing to the sickness of our foreman.

Total expenditure during 1906-7, $551.69.

BRITISH COLUMBIA.

CAMPBELL RIVER WHARF.

During the past year the Campbell river wharf has been practically completed; some dolphins and protecting piles at the corners being required to make it secure, and for which a small expenditure will be asked.

The details of the expenditure are :—

Wages	$ 1,079 39
Material	1,034 19
Tug-hire	755 00
Fuel	28 00
Team-hire	15 00
Contingencies	6 20
	$2,917 78

COLUMBIA RIVER ABOVE GOLDEN.

The work on this portion of the Columbia river is covered by the services of the tug *Muskrat* in her usual work of extending dams, closing mouths of sloughs, &c., and keeping the channel clear of snags, and the banks free from overhanging trees or sweepers.

The expenditure has been as follows :—

Wages	$ 1,314 33
Material	636 12
Provisions	489 01
Contingencies	522 65
Total	$ 2,484 26

COLUMBIA RIVER BELOW GOLDEN.

The only expenditure in connection with this service was for wages of caretaker of warehouse and a small account for hardware, as follows :—

Wages	$ 20 00
Material	46 42
Total	$ 66 42

COLUMBIA RIVER AT REVELSTOKE.

Under this heading is included the expenditure on the dam across the Columbia river at Revelstoke and the excavation of a channel for the diversion of the river at this point, for the purpose of preventing the erosion of the bank below the site of the dam and the destruction of valuable city property. The old method of protection by mattressing was found defective and has been abandoned in favour of the present more permanent and effective scheme, which, thus far, has fully met our expectations and is a work of no mean magnitude. Unfortunately an accident occurred on April 14 last by which a break of some 60 feet was made in an unfinished portion of the dam by an immense field of ice loosened above by an unusual rise in the water. The piles on either side of the break were forced out of line at the top. With the exception of the actual break which has not developed into any more serious trouble, the rest of the dam has been made secure.

The services of the dredge *Nakusp* are necessarily included in the expenditure under the above head, the details of which are as follows:—

Wages	$16,561 54	
Material	6,616 67	
Provisions	1,405 19	
Fuel	407 11	
Team-hire	1,360 75	
Tug-hire	160 00	
Contingencies	79 55	
		$25,984 21
Dredge *Naskusp*—		
Wages	$ 469 64	
Material	44 70	
Provisions	222 21	
Fuel	150 50	
Team-hire	36 00	
Contingencies	12 10	
		939 15
Total		$26,923 36

COLUMBIA RIVER AT ARROWHEAD.

Before moving the dredge *Nakusp* to Revelstoke, she was undergoing repairs at Arrowhead, putting in new dipper arm, &c., and her crew were engaged in completing, as far as built, the wing dam at that point.

The expenditure was as follows:—

Wages	$450 00
Material	45 82
Provisions	26 83
Total	$522 65

COQUITLAM RIVER.

The work on this river consists of keeping the bars, &c., free from snags and stranded logs in the interests of the lumber industry.

The details of the expenditure are as follows:—

Wages	$212 08
Material	741 70
Total	$953 78

COURTNEY RIVER (COMOX).

This work consists of a pile or crib protection to the bank of the river and for the further protection of the road forming a dike to a large and valuable area of the valley. The gaps of last year have now been closed, making the work continuous. Owing to the stone filling in rear of planking not having been completed, some 25 feet of this protection was destroyed by the impact of the logs brought down during high water. This break has been repaired and a further appropriation of $1,500 in next year's estimates is required to properly finish the work.

The expenditure has been as follows:—

Wages	$1,337 60
Material	1,518 65
Team-hire	132 00
Boat-hire	7 00
Total	$2,995 25

FRASER RIVER.

The work on this important service has consisted in making good the settlement in our dams across the Nicomen during the months of October and November; reinforcing and raising the dam at the sand heads with stone brought from the Pitt river quarries; repairs to mattrassing at Garry point, and the commencement of a groyne or wing dam at Annieville bar, extending from Annacis island towards the channel some 530 feet. The result of this work will be noted with much interest, for, without some such assistance or auxiliary work, it will be a very difficult matter to maintain a deep water channel through this bar.

The past winter was of almost unprecedented severity on this coast, and for the month of January the Fraser river was entirely closed by ice from New Westminster to the gulf and all work on the river was suspended.

The details of the expenditure are as follows:—

Superintendence	$ 1,131 45
Wages	2,888 65
Material	15,328 88
Tug-hire	120 00
Tide gauges	371 55
Provisions	124 15
Contingencies	19 45
Total	$19,984 13

FRASER RIVER BETWEEN SODA CREEK AND QUESNELLE.

This work consisted of removing some rocks obstructing the channel between the above points. The work was successfully done during the fall months of 1906.

The expenditure was as follows:—

Wages	$1,337 60
Material	1,518 65
Team-hire	132 00
Boat-hire	7 00
Total	$2,995 25

KOOTENAY RIVER.

Removal of snags, &c., between Kootenay landing and international boundary (as distinguished from Kootenay river at Proctor).

This work consisted of the clearing of the river at the south end of Kootenay lake, between the points above mentioned, of snags, and the removal of sweepers or over-hanging trees from the banks. Foreman in charge reports the river as now clear.

The expenditure was as follows:—

Wages	$1,184 50
Materials	233 25
Provisions	307 33
Boat-hire	145 00
Transportation	67 90
Total	$1,937 98

NORTH THOMPSON RIVER.

The work on the North Thompson river has been confined to removing a portion of the dam at Heffley's rapids, for the purpose of widening the 80-feet opening and so lessening the velocity of the current. This dam has answered its purpose by scouring out the channel, and the river is now navigable as far as possible at this point.

The details of the expenditure are:—

Wages	$481 00
Material	42 00
Provisions	206 87
Team-hire	145 00
Total	$874 87

SOUTH THOMPSON RIVER.

The expenditure on this service includes the cost of a survey to determine the amount of work required and the construction of a small dredge to do it, the purchase of boiler and machinery, and contingent expenses.

The following are the details:—

Wages	$ 158 50
Material	1,731 74
Provisions	9 95
Tug-hire	50 00
Engines and boiler	2,990 00
Total	$4,940 19

LADYSMITH WHARF.

As the right of way for the approach to this wharf is still in abeyance, no expenditure has been made further than the payment of a small account for hardware, as follows:—

Material	$3 85

SIDNEY ISLAND WHARF.

This wharf was built on the application of the residents of the island for facility in receiving and shipping goods and produce.

The expenditure was as follows:—

Wages	$ 686 56
Material	859 09
Tug-hire	415 00
Contingencies	58 05
Total	$ 1,998 70

SKEENA RIVER.

The work on this service was covered by the operations of the Snag Scow until August 31, when she was withdrawn and laid up and the work in connection with the improvements to navigation below Hazleton by the removal of boulders from channel. In this latter work we made a departure from former methods—and to the advantage of the work—by chartering the steamer *Pheasant* by which means we secured quarters and board for our men, and the advantage of the captain's knowledge of what boulders could be moved to the best advantage which enabled us to avoid any unnecessary work. We had also much better means of doing the work than from canoes and establishing a camp for the purpose as formerly. The time covered by the contract was eleven days at $65 per day, the board of men being an additional charge. In this time eleven large boulders were removed from the channel at different points. Unfortunately the steamer was wrecked at Beaver dam by getting out of control in the very strong current and hanging up on some rocks below, which, I am afraid, has damaged her hull beyond repair but for which we are in no way responsible. Our men and the crew of the steamer had to come down by canoe.

The powder had to be sent up by the Indians in a canoe, as no steamer with passengers will carry it. These men were retained during the work which, for the time taken, was in every way satisfactory and more effective and economical than our former methods.

The expenditure is as follows :—

Wages	$ 1,570 50
Material	604 57
Provisions	318 85
Fuel	80 00
Steamer hire and board of men	862 50
Canoe-hire	31 50
Contingencies	139 85
Total	$ 3,607 77

WILLIAMS HEAD QUARANTINE STATION.

The work on this service in the past fiscal year has consisted of repairs to wharf; the purchase and laying of some 8,000 lineal feet of 4-inch wire wound wooden pipe in connection with the water supply and general maintenance.

The expenditure has been as follows :—

Wages	$ 3,802 64
Material	3,622 97
Total	$ 7,425 61

DREDGING OPERATIONS.

During the fiscal year 1906-7, nine months ending March 31, 1907, dredging was done in the following places :—

PROVINCE OF NOVA SCOTIA.

Intercolonial Railway wharf, Pictou county.
Intercolonial Coal Company pier, Cape Breton county.
Mabou channel and harbour, Inverness county.
North Pond, Red islands, Richmond county.
Pictou bar, entrance to harbour, Pictou county.
Port Hood coal pier, Inverness county.
Whitney pier, Sydney harbour, Cape Breton county.
Windsor, government pier, Avon river, Hants county.
Yarmouth Harbour channel, Yarmouth county.

PROVINCE OF NEW BRUNSWICK.

Belyeas wharf, Queen's county.
Campbellton harbour and wharf, Restigouche county.
Cedars wharf, King's county.
Colwell's creek, Washademoak, Queen's county.
Evandale wharf, King's county.
Hampstead wharf, Queen's county.
Navy Island bar, St. John harbour, St. John county.
Oak Point wharf, King's county.
St. Andrew's harbour, Charlotte county.
Victoria wharf, King's county.

PROVINCE OF PRINCE EDWARD ISLAND.

Falconwood Asylum Wharf channel, Queen's county.
Pownal channel to wharfs, Queen's county.
Railway wharf, Charlottetown harbour, Queen's county.
Victoria, Crapaud Harbour channel, Queen's county.

PROVINCE OF NOVA SCOTIA.

Intercolonial Railway Wharf.—The dredge *St. Lawrence* was engaged from July 28 to August 7 dredging the slip between the two Intercolonial piers at Pictou, N.S., by removing 5,950 cubic yards of mud at a cost of 32·29 cents per cubic yard.

DREDGING AT SYDNEY, CAPE BRETON CO.

Intercolonial Coal and Steel Company Pier.—The dredge *Cape Breton* was engaged from October 9 to 18 and 21 to December 18, dredging at the Intercolonial Steel and Coal Company piers at Sydney, Cape Breton county, removing 14,800 cubic yards mud and stone at a cost of 56·46 cents per cubic yard.

DREDGING AT MABOU, INVERNESS CO.

Mabou.—The dredge *George McKenzie* was engaged from July 1 to September 22 removing 13,896 cubic yards mud, sand, gravel and silt from the entrance over the bar and from the channel inside, and at the new pier at the bridge near the Mabou village, at a cost of 38·31 cents per cubic yard.

DREDGING AT NORTH POND, RICHMOND CO.

North Pond, Red Islands.—The dredge *Cape Breton* was engaged from July 1 to October 8 removing 21,900 cubic yards sand, mud and gravel in making an entrance into North Pond, at a cost of 55·72 cents per cubic yard.

DREDGING AT PICTOU BAR, PICTOU COUNTY.

Pictou Bar.—The dredge *W. S. Fielding* was engaged from September 1 to December 4 removing 70,900 cubic yards sand, gravel and mud at a cost of 19·16 cents per cubic yard.

DREDGING AT PORT HOOD, INVERNESS COUNTY.

Port Hood Coal Piers.—The dredge *George McKenzie* was engaged from September 23 to October 31 removing 5,175 cubic yards sand at a cost of 98·53 cents per cubic yard.

DREDGING AT SYDNEY HARBOUR, CAPE BRETON COUNTY.

Whitney Pier.—The dredge *Cape Breton* was engaged October 19 and 20, removing 600 cubic yards mud, at a cost of 46·85 cents per cubic yard.

DREDGING AT WINDSOR, HANTS COUNTY.

Windsor Government Pier.—The dredge *Canada* was engaged from July 1 to November 5 removing 7,830 cubic yards mud at a cost of $1.12·23 cents per cubic yard.

DREDGING AT YARMOUTH, YARMOUTH COUNTY.

Yarmouth.—The dredge *Canada* was engaged in Yarmouth harbour from December 20 to January 5, removing 2,020 cubic yards mud at a cost of 61·82 cents per cubic yard; also the dredge *W. S. Fielding* operated there from July 1 to August 3, removing 33,250 cubic yards at a cost of 13·47 cents per cubic yard.

PROVINCE OF NEW BRUNSWICK.

DREDGING AT BELYEAS WHARF, QUEEN'S COUNTY.

Belyeas Wharf.—The dredge *New Brunswick* was engaged from July 19 to 27, removing 1,865 cubic yards of mud and silt at a cost of 32·66 cents per cubic yard.

DREDGING AT CAMPBELLTON, RESTIGOUCHE COUNTY.

Campbellton Harbour.—The dredge *St. Lawrence* was engaged from August 8 to 14, and August 19 to October 4, and October 6 to November 25, removing 18,375 cubic yards of mud, sand, gravel, logs, timber and old rigging at a cost of 56·35 cents per cubic yard. Several days, by instructions, the dredge was engaged in finding, lifting and replacing the buoy, mooring chain and anchor for Marine and Fisheries Department at Oak Bay, Restigouche river, Bonaventure county, province of Quebec.

DREDGING AT THE CEDARS, KING'S COUNTY.

Cedars Wharf.—The dredge *New Brunswick* was engaged July 1 to 11 removing 3,950 cubic yards of mud and silt from in front the wharf at a cost of 16·74 cents per cubic yard.

DREDGING AT COLWELL'S CREEK, WASHADEMOAK, QUEEN'S COUNTY.

Colwell's Creek Wharf.—The dredge *New Brunswick* was engaged from July 28 to September 8 removing 8,290 cubic yards of mud and silt from the channel and wharf at a cost of 30·85 cents per cubic yard.

DREDGING AT EVANDALE WHARF, KING'S COUNTY.

Evandale Wharf.—The dredge *New Brunswick* was engaged on July 12 removing 75 cubic yards hard-pan and silt in front of this wharf at a cost of 89·57 cents per cubic yard.

DREDGING AT HAMPSTEAD WHARF, QUEEN'S COUNTY.

Hampstead Wharf.—The dredge *New Brunswick* was employed from July 13 to 18 removing 1,200 cubic yards of mud and silt from in front of this wharf at a cost of 33·44 cents per cubic yard.

DREDGING AT ST. JOHN HARBOUR, ST. JOHN COUNTY.

Navy Island Bar.—The dredge *New Dominion* was engaged from January 28 to March 31, removing 9,375 cubic yards of mud from the tail of Navy Island bar at a cost of 30·51 cents per cubic yard.

DREDGING AT OAK POINT, KING'S COUNTY.

Oak Point Wharf.—The dredge *New Brunswick* was engaged from September 9 to October 8, removing 12,000 cubic yards mud, silt and logs at a cost of 16·35 cents per cubic yard.

DREDGING AT ST. ANDREWS, CHARLOTTE COUNTY.

St. Andrews Harbour.—The dredge *New Dominion* was engaged from July 1 to December 11 removing 43,165 cubic yards of mud and boulders, opening a channel through a bar in St. Andrews harbour at a cost of 22·23 cents per cubic yard.

DREDGING AT VICTORIA WHARF, KING'S COUNTY.

Victoria Wharf.—The dredge *New Brunswick* was employed from October 9 to November 23 in removing 21·700 cubic yards of mud, silt and old logs, at a cost of 11·28 cents per cubic yard.

PROVINCE OF PRINCE EDWARD ISLAND.

DREDGING AT FALCONWOOD, QUEEN'S COUNTY.

Falconwood Asylum.—The dredge *Prince Edward* was engaged in opening a channel to Falconwood wharf, East river, Charlottetown, from July 24 to September 4, removing 14,625 cubic yards of mud, at a cost of 26·57 cents per cubic yard.

DREDGING AT POWNAL, QUEEN'S COUNTY.

Pownal Channel and Wharf.—The dredge *Prince Edward* was employed in opening a channel to and at the Pownal wharf from September 20 to November 8, removing 9,855 cubic yards of mud at a cost of 39·00 cents per cubic yard.

DREDGING AT PRINCE EDWARD ISLAND RAILWAY WHARF, QUEEN'S COUNTY.

Railway Wharf, Charlottetown, P.E.I.—The dredge *Prince Edward* was engaged from July 1 to 23 and September 5 to 24, removing 8,645 cubic yards of mud and old timbers, at a cost of 41·88 cents per cubic yard.

DREDGING AT VICTORIA, CRAPAUD, QUEEN'S COUNTY.

Victoria Wharfs and Channel.—The dredge *Montague* was employed from September 6 to November 14, in removing 20,450 cubic yards of sand, silt and stone at a cost of 37·55 cents per cubic yard.

MARITIME PROVINCE—DREDGES.

The Dredge 'St. Lawrence.'

July 1 and 27, inclusive, completing a new end in boiler and one new furnace, also new donkey boiler and other repairs, at Pictou, N.S. July 28 to August 7 dredging at Intercolonial Railway wharf, Pictou, N.S., removing 5,950 cubic yards mud, at a cost of 32·29 cents per cubic yard, and completing work in railway slip. August 8 and 14, inclusive, making ready to leave and passage to Campbellton, Restigouche county, N.B. August 15 and 18, inclusive, at Oak bay, Bonaventure county, province of Quebec, grappling for Marine and Fisheries buoy chain and anchor, but failed in finding them. August 19 to October 4, and October 6 to 25, at Campbellton, Restigouche county, N.B., dredging berths at government wharf, removing 18,375 cubic yards of mud, silt, old logs, and wire rigging, at a cost of 56·35 cents per cubic yard. The chain of buckets were twice thrown off the ladder. On September 11 a diver was sent, and by September 21 buckets were disconnected, replaced on ladder and dredge resumed and continued work until October 12, when a log got in the buckets and again put them off the ladder, and broke the hoisting chain. Sent diver and by 17th had buckets replaced, repairs made and resumed work. While grappling on August 16, grappled a ship's anchor weighting about 4,500 lbs., with about fifty fathom chain, which was landed on government wharf at Campbellton, and remained there until dredge left, without being claimed. On leaving, the dredge took them to Pictou, N.S., and landed them on the Harbour Commissioner's wharf there. I now ask your instructions as to what disposal will be made of them.

On October 5, having a diver, another attempt was made to grapple the anchor and chain at Oak bay for Marine and Fisheries Department, which proved successful, when the buoy was attached and all placed in position again, the harbour master being present, placing them.

On October 26, orders were given, moorings lifted, coal and provisions taken on board, and on the 30th dredge left for Pictou, N.S.; 31st arrived at Point du Chêne to land the mate for medical treatment. November 1 wind northeast, blowing a gale, with rain. Mate sick, and left for Pictou, N.S. 2nd, 3rd, 4th, 5th, 6th, 7th, 8th and 9th, wind and weather the same. Gave assistance with wharf crib while at Point du Chêne. 10th, wind north, dredge left for Pictou. At 8 a.m., commenced to snow, went into Summerside. 11th, wind northeast, with snow and sleet; storm signals up. 12th, wind northeast with thick snowstorm. 13th, wind southwest, strong breeze, left Summerside at 7 a.m., arrived at Pictou Bar at 7.30 p.m., and anchored outside, fearing to foul dredge *W. S. Fielding's* moorings on the bar, not having seen them in daylight. 14th, arrived and anchored off the marine slip at 8 a.m., and made ready to go on slip. Mate returned on board. 15th, dredge was hauled on slip, when dredge crew with Messrs. Yorston's slip men begun to clear and paint hull, repair hopper and well doors and replace an angle iron broken in the ladder well, all of which was completed and dredge launched on November 24, when it was taken to the commissioner's wharf and landed anchor and chain. 26th, making ready to place moorings to begin dredging, when it was found the dredge was making water, owing to the boiler-makers who repaired the angle iron in ladder well not having made a good job in the rivetting, and after five days trying to stop the leak had to go on slip again on 30th for further repairs. December 3, placing mooring, blowing strong, could not get all the moorings placed, and too much ice to dredge. Crew employed chipping rust and painting. 11th, taking off buckets. 24th, crew paid off. 29th, ice in harbour breaking up. 31st, repairs under way. Captain looking after dredge. Engineer and two firemen doing repairs on engines and boilers. Some work sent to machine shop.

During the winter, part of main deck was renewed. New chains and block for hoisting dredging ladder, were put on. Boiler, engines and dredging gear overhauled and put in working order. A side shoot placed on dredge has been proved to work satisfactory. And as soon as the steel barges now building are completed, they will be used

with this dredge on the work at Campbellton, N.B., a tug removing the barges to deposit spoil, thus enabling the dredge to work continuously. This dredge had all repairs and new shoot completed and ready for work by March 31, but ice prevented doing so.

The Dredge 'Canada.'

From July 1 to November 5, 1906, this dredge was operating on the River Avon, in front of the government pier at Windsor, N.S., removing 7,830 cubic yards mud and silt at a cost of $1.12·23 cents per cubic yard. The dredge having to be aground twice every twenty-four hours, it was found that the shoe connecting stern post and rudder post was broken; that several plates in the bottom required repairs; that a new top tumbler was required; shoot required to be renewed and a side shoot for barges needed, and at the latter date under orders the dredge was made ready by the 8th to leave for Yarmouth to go on marine slip for repairs above named and to clean and paint hull. Owing to unfavourable weather the dredge did not leave until 7 a.m. of the 10th, and arrived at Spencer's island by 11.30 a.m., where it was storm-bound until the 15th, when it sailed at 8 a.m. and came to anchor at Digby at 6 p.m. 16th, sailed at 11 a.m., returned at 12.10 p.m., owing to heavy sea and rough in the bay. 17th, detained by gale from northwest. 18th, sailed from Digby at 11 a.m., arrived at Westport at 4.30 p.m. 19th, too rough to proceed. 20th, sailed from Westport at 5 a.m.; arrived at Yarmouth at 10 a.m. Landed spare gear. 21st, took off ladder well doors and landed them at D. A. railway wharf. 22nd and 23rd, blew down boiler and cleaning it. 24th, 26th and 27th, waiting to get on slip; crew chipping and painting ladder. 28th, placed dredge on marine slip at 8 a.m., and completed hauling at 12.30 p.m. Detained by slip rollers getting out of place. Crew immediately began scraping and cleaning hull for painting. Several machinists assisting engineer at repairs to hopper doors, rudder, after shoe, stern and rudder posts and plates in dredging bottom, all of which is being continued, and on December 19 above named work completed, dredge came off slip at noon, and took in water and coal. 20th, laid moorings. 21st, blowing and not fit weather to dredge or go outside to deposit spoil. 22nd, dredged two loads, rove tackles to haul out several spiles that were in dredge's way. 24th, dredged two loads; took in coal and water. 25th, Christmas. 26th, hauled one spile. 27th, hauled one spile, and made ready to haul a second. 28th, hauled two spiles and dredged three loads. 31st, took in coal. From December 20 to January 5, hauled four spiles and dredged 2,020, cubic yards at a cost of 61·82 cents per cubic yard. Further repairs for top tumbler, side shoots and steel mitre wheels are being proceeded with, and March 30 new top tumbler, pump and side shoot were completed, and I saw one steel barge loaded by the new side shoot and discharged before I left for home, the matter of shoot proving successful, and when the second barge is received, barges and shoot will be complete. The *Canada* would continue to work at Yarmouth until April 15, and then leave for Windsor.

The Dredge 'New Dominion.'

On July 1, 1906, this dredge was engaged at St. Andrew's, in the county of Charlotte, N.B., dredging a western channel, 150 feet wide and 6 feet deep at low water through the harbour bar, and by December 11 had removed 43,165 cubic yards clay, mud and boulders at a cost of 22·23 cents per cubic yard. On July 5 and 6, dredge detained by tug being disabled. July 9, casting on crane broken; tug took casting to St. John, had new casting made, and dredge was ready for work on the 14th. Resumed dredging Monday, 16th. This dredging is all tide work. October 13, one anchor post broken; took broken post out and put in new post, which was on hand ready for use. The dredge was unable to work a number of days in November, owing to unfavourable weather. On December 3, the fresh water service was all frozen up. Orders were received, and work closed. Dredge dismantled and made ready to leave. On the 12th the dredge left St. Andrew's in tow of tugs *Lord Kitchener* and *Lord*

Roberts, and arrived in St. John harbour 7 p.m. Work repairing dredge and scows began immediately, that they may be ready to do work at tail of Navy island, St. John harbour. Sent bucket to foundry for repair, and repairing scows. 17th, shipped in place the two forward anchor posts. 18th, shipped one after anchor post. 19th, shipped the second after post. December 31, repairs will be completed in a few days to proceed with work at Navy island bar, St. John harbour. Repairs being completed and orders received, dredging was commenced on Navy island bar, St. John harbour, January 28, and by March 31, 9,375 cubic yards of mud had been removed, at a cost of 30·51 cents per cubic yard.

The Dredge 'Prince Edward.'

From July 1 to 23, and September 5 to 24, 1906, this dredge was continuing operations at the Prince Edward Island Railway wharf, Charlottetown, Prince Edward Island, removing 8,685 cubic yards mud, at a cost of 41·88 cents per cubic yard, preparing foundations for new wharfs, and from July 24 to September 4 opening a channel from the East river into the Falconwood Hospital wharf, where 14,625 cubic yards were removed, at a cost of 26·57 cents per cubic yard, completing the work.

From September 25 until November 8 the dredge was engaged at Pownal, deepening the channel from Pownal bay into the Pownal wharf by removing 9,855 cubic yards mud and silt, at a cost of 39 cents per cubic yard. This work is not completed. Nearly all of the above work was tide work, and not full time for working. After November 3 weather was unfit for work, and on the 9th dredge was ordered to dismantle and prepare to leave for Charlottetown, and on the 14th, all being ready, the tugs *Brant* and *F. M. Batt* removed the plant to Charlottetown, and hauled three scows and water boat out for repairs. Dredge moored at Ferry wharf, and stored all spare gear. Five of the crew left for their homes on December 6. Engineer and fireman making engine, boiler and machinery ready for inspection. Cook and watchman left for their homes on the 15th. Engineer making repairs, which were completed and dredge ready for work by March 30.

The Dredge 'George McKenzie.'

My last report left this dredge working at Mabou, Inverness county, Nova Scotia, where it continued work from July 1 until September 22, improving the depth of water to 16 feet on the outer bar, when wind and weather permitted, and at other times on the channel inside, where a large amount of filling in had taken place, and at and near the bridge at the village, removing 13,896 cubic yards clay, sand and silt, at a cost of 38·31 cents per cubic yard. The dredge worked at Port Hood coal piers from September 23 until October 31, improving the loading berths at the coal piers by removing 5,175 cubic yards sand, at a cost of 98·53 cents per cubic yard. The work performed at Port Hood will fill in again very rapidly. Owing to the crane boom breaking and while being replaced by a new boom, several days time (from August 14 to 22) were lost, and much time was lost on account of weather at Mabou. The dredge also lost ten days making ready and waiting for suitable weather to transfer plant from Mabou to Port Hood, September 19 to 28. Weather only permitted working part of fourteen days from September 29 to end of October. Weather proving worse, in November orders were given and dredge and plant were dismantled and prepared to leave for Pictou. In the storm, three vessels went ashore not far from the dredge and some of them were a total loss. On November 10 the dredge left for Pictou in tow of tugs *Goliah* and *Rona* and arrived on the 11th. On the 12th, landed gear on Market wharf. 19th, went on marine slip, and cleaning and stripping old zinc off dredge was at once commenced. By December 5 the dredge's hull was recovered with new No. 14 and 12 zinc, and dredge was ready to come off slip, but ice making, the slip people declined to put the slip down to launch the dredge, and it will

remain on the slip for the winter. The engineer is now proceeding with repairs and renewals. The crew paid off on December 13. While this dredge was ready for work on March 30, owing to heavy ice under and around the marine slip it could not be launched until May 2, and then the draw in the bridge over East river being out of repair the dredge was ordered to clean up some work for the Acadia Coal Co., which the dredge *St. Lawrence* was unable to complete.

The Dredge 'Cape Breton.'

On July 1, this dredge was at St. Peter's canal, waiting orders from Ottawa. The following orders were received and given to Captain Peter DeCoste:—'Please send dredge *Cape Breton* to Red islands to excavate channel fifteen feet deep and sixty feet wide.' On July 1, the dredge left St. Peter's canal and arrived at Johnston's harbour. July 2, was Dominion day and kept by Captain DeCoste and crew. 3rd to 6th preparing dredge for work. 7th, towed dredge from Johnston's harbour to Red islands, laid out work and dredged one scow load. 9th, detained by bucket mouth broken and towing plant to and from Johnston's harbour; dredged three scow loads. 10th, detained by changing buckets and taking water. 11th, dredged one scow load, then detained with bucket latch not working right. 16th, dredged four scow loads; dispensed with services tug *Weatherspoon*; tug *Nelson* taken on. 17th, dredged five scow loads. 18th, repairing scow chain and buckets. 19th, dredged two scow loads and weather unfavourable for dredging. 20th, coaled dredge; weather unfavourable for dredging. 21st, dredged four scows; buckets working bad. 22nd, Sunday. 23rd, unable to use scows, deposited spoil on banks; detained by weather; worked eight hours. 24th, compressor and bucket working bad; dredged five hours. 25th, detained by high wind. 26th, detained by high wind and coaling. 27th and 28th, detained by unfavourable weather. 29th, Sunday. 30th, took bucket off and repaired it. 31st, unfavourable wind and rough sea. August 1, dredged nine hours. 2nd, dredged eight hours; 3rd, dredged eight hours; 4th, dredged six hours, backing chain yoke broken. 6th, coaling, taking water and repairing backing chain yoke. 7th, towed plant from Johnston's harbour to Red islands, weather unfit to work and returned to Johnston's harbour for safety. 8th, dredged for seven hours. At 5 p.m., while making head move, crane unstepped at deck, doing considerable damage and injuring the cranesman. Secured crane and took up bucket with tackles, and towed to Johnston's harbour for shelter, and reported to Superintendent. 9th, on receipt of Captain's report, Mr. James Wright, Inspector, was sent to the dredge without delay to have damage made right and to get dredge to work. 9th and 10th, crew preparing to take bucket off; Captain absent for medical treatment. 11th, Mr. Wright, Inspector, arrived and after consulting with Captain DeCoste the dredge was made ready and towed to St. Peter's to reship crane. Engineer to Sydney for repair of broken parts. 12th, Sunday. 13th to 18th, putting crane and swinging gear in place and towed dredge back to Johnston's harbour. 17th, tug *Nelson* taken on at 3.30 p.m. 19th, Sunday. 20th, fitting up pipes and friction gear. 21st, while putting up bucket handle, chain sling broke, and let bucket handle fall, breaking one of the bucket and arm braces. 22nd, Engineer to foundry getting brace repaired; crew putting bucket and arm up and compressor on. 23rd, waiting engineer's return with repaired machinery. Scow chains were put in order. 24th, engineer returned, and repairs made. 25th, detained by high wind, and sea; men employed in getting coal. 26th, Sunday. 27th, dredged nine hours, when haul-back chain broke. 28th, detained by weather. 29th, dredged eight hours. 30th, dredged eight hours. 31st, dredged seven hours.

September 1, detained by unfavourable weather; putting on new hoisting cable. 2nd, Sunday. 3rd, detained by weather, changing buckets. 4th, detained by weather; coaling plant. 5th, detained by weather, sent tug to St. Peters for coal. 6th, dredged five hours, detained by weather. 7th, detained by weather, repairing compressor. 8th, dredged three hours; spoon handle knee to bucket broke. 9th, Sunday. Engineer with

tug *Nelson* left for Sydney to get repairs to broken knee. 10th, filled bunkers and changed bow anchor. 11th, working at bucket; sent tug for coal. 12th, working at scows and anchors while waiting. Tug *Goliah* returned disabled. 13th, cleaning up while waiting. 14th, engineer returned at noon; fitting repaired arm. 15th, connecting bucket and knee to spoon handle. 16th, Sunday. 17th, dredged eight hours. 18th, too rough to dredge. 19th, dredged six hours; weather detained work. 20th, towed plant to work; dredged eight hours. 21st, dredged eight hours. 22nd, detained by weather; repairing spud friction. 23rd, Sunday. 24th, detained by weather; took in water. 25th, detained by unfavourable weather. 26th, dredged nine hours and repaired backing chain. 27th, dredged seven hours; cut through into North Pond, and at 4 p.m. bottom cable jammed between bottom sheave in foot of anchor post. 28th, taking anchor post down to make repairs. 29th, making repairs and putting new cable on. 30th, Sunday.

October 1, placing new cable on. 2nd, placing new cable and putting spud post in place. 3rd, received instructions to prepare to leave; removed plant to Johnston's harbour and took in coal. 4th, dismantling plant and making tow ready to leave, and 5th and 6th awaiting further instructions. 7th, Sunday. 8th, waiting orders. 9th, at 10 a.m. received orders to proceed to Sydney. 10th, strong gale; waiting for favourable weather. 11th, at 10 a.m. wind moderating, left with dredge and arrived at Port Bevis at 6 p.m. On the 12th, at 5 p.m., returned for scows and returned to Port Bevis with them at 6 p.m. 13th, at 5 a.m. left with dredge and one scow and arrived at Sydney at 5.31 p.m. 14th, Sunday. 15th, tugs went back for scow and returned with them at 6.30 p.m.; crew were landing spare gear and mantling dredge. 16th, crew landing spare gear and mantling dredge. 17th, mantling plant and preparparing for dredging. 18th, preparing scows and storing material. 19th, at noon took up work at Whitney pier; dredged one scow. 20th, dredged two scow loads and made ready to clean boilers. 21st, Sunday. 22nd, cleaning boiler and coaling. 23rd, dredging five scow loads, and met logs and boulders. 24th, dredged five scows; still lifting logs. 25th, dredged five scows; still lifting logs and boulders. 26th and 27th, dredged two scows each; pump rod broken and repaired and repairing steam pipes in connection with compressor. 28th, Sunday. 29th, dredged two scows and repaired chain. 30th, dredged three scow loads and engaged receiving new spoon handle. 31st, dredged four scow loads and repaired scow chains.

November 1st, dredged three scows; detained with boulders. 2nd, dredged two scows. 3rd, dredged one scow; repairing chain. 4th, Sunday. 5th, detained by weather; renewed donkey stack. 6th, dredged four scows, and received new arm knees from machine shop. 7th to 12th, detained by compressor plate breaking, and repaired it and backing chain wheel, and anchor sheave in post. 13th, dredged four scow loads and detained with boulders and heavy rock in bucket. 14th, dredged six scows and detained with boulders in bucket. 15th, dredged three scows; broke bucket tooth. 16th and 17th, repairing bucket tooth. 18th, Sunday. 19th, 20th, 21st and 22nd, completed repairs to bucket tooth. 23rd, spud bottom cable crosshead broken; dismantling and repairing. 24th, at 8 a.m. took up work, when arm brace connecting bucket bent, and lug on bucket broken; also after spud wheel broken. 25th, Sunday. 26th and 30th, repairing and crew employed scaling inside barges.

December 1 to 5, repairing brace, lug on bucket and wheel. 6th, dredged one scow load and coaled dredge. 7th, weather bad; dredged four loads. 8th, weather unfit to work; breaking ice and thawing lines. 9th, Sunday. 10th, employed breaking ice about plant to keep it from freezing up, and coaling; towed scow to Cranberry Creek for safety. 11th, shovelling snow; afternoon dredged two scow loads. 12th, dredged two scow loads; detained with swinging cable broken. 13th, dredged four scow loads; detained with tug *Merrimac* aground with fog, &c. 14th, dredged one scow load; detained thawing ice. Dredge bucket dropped in scow pocket, bending door and fouling cable; friction slipped. 15th, dredged four scow loads and detained two hours with large rock in bucket. 16th, Sunday. 17th, dredged four scow loads

and detained with scow winch friction broken. 18th, worked forenoon; dredged one scow load after completing repairs to winch; afternoon, ice breaking; towed plant to winter quarters at Rhodes Currey wharf, and dispensed with *Merrimac*. 19th, dismantling plant for repairs. 20th, dismantling the plant and moving same into winter quarters. 21st, moving plant, cleaning crane and blowing down main boiler. 22nd, crew cleaning crane and disconnecting machinery. 23rd, Sunday. 24th, pumping water out of limbers; blew down donkey boiler. 25th, Christmas. 26th, cleaning water tanks and A frame and boiler. 27th, cleaning boiler and tanks. 28th, painting A frame, crane and wire stays. 29th, cleaning tanks and boiler and painting them inside. 30th, Sunday. 31st, completing tanks and boiler; crew will be paid off January 5. Dredging at North Pond, Red islands, Richmond county, N.S., 21,900 cubic yards at a cost of 55·72 cents per cubic yard. Dredging at Sydney, Whitney pier, 600 cubic yards at a cost of 46·85 cents per cubic yard, and at Sydney Steel Company's piers, 14,800 cubic yards at a cost of 56·46 cents per cubic yard. During the winter, repairs and renewals were made and the dredge ready by March 30, but too much ice for tugs or dredge to resume work.

The Dredge 'New Brunswick.'

From July 1 to 11, 1906, this dredge was engaged on the River St. John, improving the depth of water in front of the Cedar's wharf, King's county, N.B., completing the same by removing 3,950 cubic yards at a cost of 16·74 cents per yard. At Evandale wharf, King's county, on July 12, 75 cubic yards were removed, at a cost of 89·57 cents per cubic yard. Owing to the bottom being too hard for the clam shell, this work was left unfinished, to be taken up by the dredge *New Dominion* at some future date. July 13 to 18, this dredge was engaged improving the depth of water in front of the wharf at Hampstead, in Queen's county, N.B., by removing 1,200 cubic yards at a cost of 33·44 cents per cubic yard, and completing the work. From July 19 to 27, the dredge removed 1,865 cubic yards in front of Belyea's wharf, Queen's county, N.B., at a cost of 32·66 cents per yard, and completed the work. From July 28 to September 8 it removed 8,290 cubic yards in front of the wharf at Colwell's creek, Washademoak lake, Queen's county, N.B., at a cost of 30·85 cents per cubic yard, completing the work. August 14 and 15, anchor post broken and repaired. From September 9 to October 8, it was engaged in front of Oak Point wharf, King's county, N.B., removing 12,100 cubic yards at a cost of 16·35 cents per cubic yard, and completing the work. September 26, engine was disabled. From October 9 to November 23, the dredge worked in front of Victoria wharf, King's county, N.B., removing 21,700 cubic yards at a cost of 11·28 cents per cubic yard, completing the work. Ice making, the dredge was ordered to St. John, where it arrived on November 26, and went into winter quarters, and after placing everything in order, the crew was paid off on December 3. Repairs to boiler, engines and machinery are now being proceeded with to completion by March 30, but owing to ice and freshet in river will be unable to work before May 15, if then.

The Dredge 'W. S. Fielding.'

This dredge continued improving the channel at Yarmouth, N.S., July 1 to August 3, 1906, removing 33,250 cubic yards mud, at a cost of 13·47 cents per yard. Considerable time was lost with vessels in the dredge's way, waiting for rise of tide to get out past light where there is but 15 feet at low water (rock) and dredge when loaded draws 19 feet; and also in repairing damaged buckets and by fog. August 4 received orders to leave for dry dock at Halifax; took up moorings, getting ready to leave; adjusted compasses; 10th, sailed from Yarmouth at 6.30 a.m. Weather foggy, and anchored at Bon Portage at noon, 11th, at anchor; thick fog; 12th, at anchor; thick fog; 13th, sailed from Bon Portage at midnight; anchored at Mosher's harbour at 5 a.m. 14th, arrived at Halifax at 11 a.m. At 4 p.m. I went on board to arrange about docking.

Crew engaged painting inside of hull. 15th, I again visited dredge; crew engaged painting. A vessel in the dry dock prevents the dredge docking for a few days. 16th, 17th, 18th, 20th crew painting inside hull. 21st, dredge in dry-dock at 1.20 p.m. blocks not right; could not pump dock. 22nd, divers working on blocks. 23rd, docked and dock pumped at 8 a.m. and men at work scraping. 24th, men scraping dredge's bottom. 25th, men scraping and painting bottom. 26th, Sunday. 27th, painting bottom. 28th, raining; could not paint. 29th, painting and repairing hopper door chains. 30th, finished painting. 31st, came out of dock at 9 a.m., and moored at Intercolonial Railway pier No. 5 to coal.

September 1 finished coaling, getting ready to leave for Pictou. Boilermakers working on patch on bow, and rigging gear for derrick. 3rd, sailed from Halifax for Pictou, 5 a.m. Heavy sea, went into Jeddore and anchored 9 a.m. Rain and heavy wind. 4th at 1 p.m., left Jeddore for Pictou. 5th at 8 a.m., came to anchor at Hawkesbury. Engineer said his men could not work any more without rest, had to come to anchor and stop on that account. At 1 p.m., took Frank Nickerson on shore to a doctor. Doctor advised to put him in hospital, which was done. 6th, sailed from Port Hawkesbury at 4 p.m. Arrived at Pictou, N.S., at 1 p.m., anchored in the stream. 7th, lowering buckets; taking off lashings and doing other work. 8th, making ready for dredging on Pictou bar. Went into Intercolonial Railway pier and landed spare gear. 9th, Sunday. 10th, making ready procuring more men. 11th, steamed to coal pier and got coal. 12th and 13th, waiting arrival of tug to run moorings. 14th and 15th, too rough to lay moorings; men engaged painting under deck. 16th, Sunday. 17th, laid moorings and dredged one load. 18th, a vessel took away one of the mooring buoys. Dredged two hoppers, 1,600 yards. 19th, dredged one load, 800 yards; heavy wind in afternoon; anchors would not hold to dredge. Tug *Victoria* left and *Wm. Aitkin* took its place. 20th, dredged two loads, 1,700 yards. 21st, dredged two loads, 1,500 yards. 22nd, dredged two loads, 1,800 yards. 23rd, Sunday. 24th, dredged one load, 900 yards; lost bow moorings, had to grapple them and lost getting one load, on that account. 25th, dredged two loads, 1,800 yards. 26th, took coal and repairing guide in shoot. 27th, dredged two loads, 1,800 yards. 28th, dredged two loads, 1,800 yards, and put end of suction on. 29th, worked suction two hours, and dredged about 200 yards, then resumed with buckets and dredged two loads, 1,000 yards. 30th, Sunday.

On October 1 dredged three loads, 2,200 yards. 2nd, took in coal. 3rd, dredged two loads, 1,700 yards. 4th, dredged two loads, 1,800 yards and moved bow anchor. 5th, dredged two loads, 1,800 yards and moved anchors. 6th, dredged two loads, 1,800 yards; 7th, Sunday. 8th, dredged two loads, 1,500 yards. Vessel took buoy off mooring, and it took one and a half hours to grapple for the moorings. 9th, dredged one load, 750 yards; blowing very hard and had to quit work. 10th, took in coal. John Johnston refused to trim coal; paid him off. 11th, gale of wind; could not dredge; took end of suction off and placed it on wharf. 12th, dredged two loads, 1,700 yards. 13th, dredged two loads, 1,800 yards. Dredge took a list in loading; had to put water in starboard tank to upright her. 14th, Sunday. 15th, dredged three loads, 2,200 yards. 16th, gale of wind. 17th, dredged two loads, 1,600 yards, and moved anchors. 18th, Thanksgiving Day, holiday. 19th, dredged three loads, 2,400 yards. 20th, dredged two loads, 1,600 yards, moved anchors. 21st, Sunday. 22nd, dredged two loads, 1,600 yards. 23rd, took in coal. 24th, dredged three loads, 2,200 yards. 25th, dredged one load, 750 yards; blowing a gale and had to stop dredging. 26th, dredged three loads, 2,400 yards. 27th, dredged two loads, 1,600 yards, and moved anchors. 28th, Sunday. 29th, 30th and 31st, cleaned boilers and filled water tanks. November 1, 2, 3, 4, 5 and 6, gale and sea on bar; unable to dredge. Men engaged in painting. 7th, dredged two loads, 1,500 yards. 8th, heavy swell on bar, unable to dredge. 9th, dredged one load, 800 yards, and had to stop for heavy swell on bar. 10th, dredged two loads, 1,600 yards. 11th, Sunday. 12th, blowing a gale. 13th, dredged one load, 800 yards and took in coal. 14th, dredged two loads, 1,600 yards and moved anchors. Inspector on

board. 15th, dredged two loads, 1,600 yards and moved anchors. 16th, gale of wind; could not dredge. 17th, dredged two loads, 1,700 yards. 18th, Sunday. 19th, dredged two loads, 1,600 yards and moved anchors. 20th and 21st, dredged two loads each, 1,600 yards and moved anchors. 22nd, dredged two loads, 1,600 yards and moved anchors. 23rd, dredged two loads, 1,600 yards and moved anchors. 24th, snowstorm, did not dredge. 25th, Sunday. 26th, dredged two loads, 1,700 yards and moved bow anchor. 27th, dredged one load, 850 yards; detained by thick snowstorm. 28th, dredged two loads, 1,600 yards. 29th, gale of wind. 30th, gale of wind; could not dredge on bar.

December 1, dredged two loads, 1,650 yards. 2nd, 3rd and 4th, gales of wind; could not work; ice-making. 5th, afraid to leave anchor down longer to have them frozen in the ice in the way of winter steamers. 6th, ordered anchors taken up and dredge placed in winter quarters at Intercolonial Railway new pier. 6th, hoisted buckets and secured them. 7th, I visited the dredge. Men storing gear under deck. 8th, putting dredge in order for winter. 9th, Sunday. 10th, crew making dredge ready for winter. 11th, crew employed cutting dredge off 20 feet from pier in the ice. 12th, cleaning ship. 13th, finished cutting ice to move dredge 20 feet from pier. 14th, finished cleaning up. 15th, paid off mate, second mate, cook, one oiler, seamen and firemen. 16th, Sunday. 17th, engineers making ready for winter. Mr. Wright visited dredge. 20th, first cook paid off. 21st, machinists taking ends off winches for repairs. 22nd, to 31st, captain, engineers and firemen employed.

From September 1 to December 4, 70,900 yards gravel and sand were removed from the bar at Pictou at a cost of 19·16 cents per cubic yard, leaving the work as yet unfinished. Repairs are under way, and will be urged as rapidly as possible, and will be ready long before it can work on Pictou bar.

The Dredge 'Montague.'

On August 25, 1906, I received your telegram as follows: 'Am wiring Mr. Howden that if he gets to Prince Edward Island with dredge *Montague* on or before September 1 to take her to Victoria harbour, where she is to do two weeks' work, then she is to go to Souris.'

August 28 you wired: 'If Mr. Howden is not towing dredge *Montague* to Victoria, please make arrangements to have this done at once.' Same date I wired you: 'Mr. Howden with *Speedy* and scows have not arrived at Souris yet; will wire Captain to make *Montague* ready to leave for Victoria as soon as Mr. Howden arrives.' I also wired Capt. D. A. McDonald at Souris, same day: 'Tell Mr. Howden, minister directs *Montague* and scows are to be taken immediately to Crapaud, Victoria. You will make dredge ready at once.' Tugs were immediately procured and the dredge and scows taken to Victoria. Dredge arrived at Victoria on September 5, and on the 6th I wired captain to prepare dredge for work immediately. On the 7th, Captain D. A. McDonald wired: 'The A frame tipped back and it and crane came down on deck; a bad wreck. Bolts broken on swinging circle; don't think repairs can be effected at Victoria.

I immediately left for Victoria, taking Mr. Wright with me, and on arrival at Charlottetown took Mr. J. B. Hegan with us to Victoria, made an investigation of the damage, and made report to you. Seeing the damage was not as bad as represented by Captain McDonald, I decided to have repairs made at Victoria, and proceeded at once to do so, leaving Mr. James Wright, inspector to look after them. On the 17th, repairs were completed, and the dredge ready for work, and begun dredging on the 18th, lifting 300 yards. 19th, dredged 400 yards. 20th, dredged 400 yards. 21st, sheave in foot of port spud post broke, and 22nd and 23rd making repairs. 24th, dredged 500 yards. 25th, dredged 200 yards; hoisting cable broken and new cable rove on 26th. 27th, dredged 400 yards. 28th, dredged 200 yards. 29th, dredged 500 yards. 30th, Sunday.

October 1, dredged 800 yards; 2nd, 1,200 yards; 3rd, 1,100 yards; 4th, 1,000 yards; 5th, 1,100 yards; 6th, 400 yards. 7th, Sunday. 8th, 300 yards, took coal. 9th, 800

yards. 10th, 200 yards. 11th, 200 yards; gale and rain. 12th, 400 yards. 13th, 200 yards. 14th, Sunday. 15th, 200 yards. 16th, 700 yards. 17th, 700 yards. 18th, Thanksgiving day. 19th, 850 yards; scow chain broke. 20th, 500 yards; took in water. 21st, Sunday. 22nd, took coal and water. 23rd, 100 yards; heavy rain. 24th, dredged 700 yards and broke backing chain. 25th, 200 yards; heavy gale of wind. 26th, 400 yards. 27th, 900 yards. 28th, Sunday. 29th, 700 yards. 30th, 1,100 yards. 31st, 900 yards. Broke bucket door at 3 p.m. Sent tug to Charlottetown for repairs to door.

November 1 and 2, tug returned with door. 3rd, shipped bucket door and dredged 900 yards. 4th, Sunday. 5th, 900 yards. 6th, 100 yards. 7th, unable to work; weather bad. Ordered to make plant ready to tow to Charlottetown; blowing hard. 9th and 10th, dismantling dredge. 11th, Sunday. 12th, snow and sleet; dismantling. 13th, plant ready to leave. 14th, fine, waiting for *Stanley* to tow plant to Charlottetown; did not come. 15th, being fine at 9.10 a.m. left wharf and towed out to fareway buoy to meet *Stanley* as arranged. Although *Stanley* was within four miles of dredge, she steamed away to the westward. Captain McDonald could do nothing then but continue on with the little tug *Islander* alone towing. Wind and tide being favourable they arrived in Charlottetown at 7.45 p.m. and anchored in the harbour. 16th, a fierce gale of easterly wind; lying at anchor; docked scows. 17th, docked dredge at Carvell's wharf for the present. Peake's wharf being occupied. 18th to 30th, storing material and making dredge ready for winter and repairs. Landing timber for anchor posts and bucket arm on wharf. Tug *Islander* started with two scows for Souris on 23rd. Found too much wind and sea outside and returned at noon. 26th, tugs *Islander* and *F. M. Batt* towed scows to Souris. 30th, paid off crew. December 1 to 8, engineer and firemen to work on machinery. On the 10th, Mr. James Wright, inspector, visited the dredge and plant. Captain and Mr. Wright visited scows at Souris on the 12th. Engineer and fireman from 9th to 31st, working on repairs and putting the machinery in order. Cut dredge and plant out 20 feet from wharf in the ice. Dredge frozen in; took off moorings. 24th, blew off boiler. The quantity dredged at Victoria was 20,450 cubic yards at a cost of 37·55 cents per cubic yard. Repairs and improvements to dredge were proceeded with and completed March 30, and dredge ready for work.

The Dredge 'Northumberland.'

This dredge has been engaged on the eastern passage, Toronto, during the past season, and is expected to leave for the maritime provinces by June 1.

The Tug 'Rona.'

This tug gave good service the past season in attendance on the dredge *George McKenzie.*

The Tug 'Cricket.'

The tug *Cricket* has not been in commission the past season, a larger tug being required for the work the dredge it had attended was doing.

The Tug 'Helena.'

A new steel tug building at Collingwood, Ontario, will be completed and leave for the maritime provinces about the first of June next.

DREDGING PLANT.

The following is a summary description of the dredging plant owned and operated by the Public Works Department in the maritime provinces:—

The Self-propelling Elevator Dredge 'St. Lawrence' (iron hull).

Length over all—175 feet.
Beam—30 feet.
Draught when loaded aft—13·5 feet.
Draught when loaded forward—8·5 feet.
Least working depth (ladder with 32 buckets dropped 30 feet from bow) 8·5 feet.
Greatest working depth (bucket ladder dropped 40 feet from bow)—28 feet.
Capacity of hopper for spoil material—350 cubic yards.
Speed when light—6 to 7 miles per hour.
Speed when loaded—3 to 4 miles per hour.
Daily rate of dredging hard material—350 to 700 cubic yards.
Daily rate of dredging ordinary earth—750 to 1,000 cubic yards.
Daily rate of dredging soft material—1,050 to 1,400 cubic yards.

The Self-propelling Elevator Dredge 'Canada' (iron hull).

Length over all—130 feet.
Beam—20 feet.
Draught when loaded aft—11·5 feet.
Draught when loaded forward—7 feet.
Least working depth—7 feet.
Greatest working depth (ladder, 24 buckets)—16 feet.
Capacity of hopper for spoil material—90 cubic yards.
Speed when light and newly painted—6 to 7 miles per hour.
Speed when loaded—3 to 4 miles per hour.
Daily rate of dredging in hard bottom—180 to 270 cubic yards.
Daily rate of dredging with ordinary digging—180 to 360 cubic yards.
Daily rate of dredging in soft material—360 to 450 yards.

The Self-propelling Elevator and Sand Pump Dredge 'W. S. Fielding' (steel hull).

Length over all—247 feet.
Width over all—42 feet.
Draught when loaded aft—19 feet.
Greatest working depth—61 feet.
Capacity of hoppers for spoil—1,000 cubic yards.
Speed when light—7 miles per hour.
Speed when loaded—4 miles per hour.
Daily rate of dredging—2,000 cubic yards with buckets.
Daily rate of dredging—1,000 cubic yards with sand pump.

The Spoon Dredge 'New Dominion' (wooden hull).

Length over all—90 feet.
Width—28 feet.
Draught—5½ feet.
Greatest working depth—21 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging with ordinary material—450 cubic yards.
Daily rate of dredging on soft material—600 to 700 cubic yards.
Number of dump scows or barges used—2.

The Spoon Dredge 'Prince Edward' (wooden hull).

Length over all—80 feet.
Width—28 feet.
Draught—6 feet.
Greatest working depth—21 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging with ordinary material—500 cubic yards.
Daily rate of dredging in soft material—600 to 700 cubic yards.
Number of dump scows or barges used—3.

The Spoon or Dipper Dredge 'George McKenzie' (wooden hull).

Length—90 feet.
Width—28 feet.
Draught—6 feet.
Greatest working depth—22 feet.
Daily rate of dredging in hard material—350 cubic yards.
Daily rate of dredging with ordinary material—500 cubic yards.
Daily rate of dredging in soft material—600 cubic yards.
Number of dump scows or barges used—3.

The Boom and Dipper Dredge 'Cape Breton' (steel hull).

Length—91 feet.
Beam—36 feet.
Draught—7½ feet.
Greatest working depth—34 feet.
Daily rate of dredging in hard material—1,000 cubic yards.
Daily rate of dredging in ordinary material—1,500 cubic yards.
Daily rate of dredging in soft material—2,000 cubic yards.
Number of barges used (each of 200 yards capacity—steel)—3.

The Clam Shell Dredge 'New Brunswick' (wooden hull).

Length over all—90 feet.
Width—25 feet.
Draught—2½ feet.
Greatest working depth—17 feet.
Daily rate of dredging in hard material—180 cubic yards.
Daily rate of dredging in ordinary material—300 cubic yards.
Daily rate of dredging in soft material—450 cubic yards.
Number of decked scows used—3, as at present, and 2 bottom-dumping scows.

The Spoon Dredge 'Montague' (steel hull).

Length over all—90 feet.
Width—37 feet 8 inches.
Draught—5 feet 6 inches.
Greatest working depth—28 feet.
Daily rate of dredging, 10 hours—1,000 cubic yards.
Number of barges used (each 72 feet long 19 feet 8 inches wide, depth 7 feet)—2.

The Sand Pump Dredge 'Northumberland' (steel hull).

Length—130 feet.
Agitator—65 feet.
Width—52 feet.

Draught—7 feet.
Working depth—40 feet.
Daily working capacity—4,000 cubic yards in ten hours.

Tug 'Cricket.'

Length—36·5 feet.
Beam—7·3 feet.
Draught—3·10 feet.
Horse power—4.

Tug 'Rona.'

Length—85 feet.
Beam—19·3 feet.
Draught—8 feet.
Horse power—25.
One pile driver, engine and boiler fitted on scow.
One stone lifter, engine and large grips (no boiler).

Steel Tug 'Helena.'

Now building at Collingwood, will be ready for service by June 1.

MEMORANDUM of quantities removed by the several dredges in the maritime provinces, &c., during (nine months) the fiscal year 1906-7.

	Cubic yards.
St. Lawrence	24,325
Canada	9,850
New Dominion	52,540
Prince Edward	33,125
Geo. McKenzie	19,071
Cape Breton	37,300
New Brunswick	49,180
W. S. Fielding	104,150
Montague	20,450
Northumberland—(Work at Toronto not included).	
	349,991

CLASSIFICATION of Disbursements of the Dredges in the Maritime Provinces during the Nine Months ending March 31, 1907.

DREDGE 'ST. LAWRENCE.'

ITEMS.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	481 44	504 66	502 19	511 00	474 90	455 29	311 95	292 22	378 00	3,911 65
Coal	144 00	96 75	338 75	596 25	62 13	6 22		77 00		1,321 10
Provisions	137 55	216 80	161 89	198 58	109 43	150 06		99 58	61 47	1,135 36
Stores	56 93	25 91			25 55		4 85		140 10	253 34
Equipment				231 50				71 97		303 47
Water				12 10						12 10
Repairs	649 68	680 06	18 00	251 96	79 25	16 60		383 05	1,665 65	3,744 25
Pilotage	21 00	138 34		155 00	104 05	9 00				427 39
Towage			150 00							150 00
Wharfage			105 00							105 00
Contingencies	14 60	18 89	165 48		75 45		28 51		3 06	305 99
Totals	1,505 20	1,681 41	1,441 31	1,956 39	930 76	637 17	345 31	923 82	2,248 28	11,669 65
Working expenses	855 52	1,001 35	1,441 31	1,704 43	851 51	156 28	29 50	248 55	192 22	6,480 67
Repairs, ordinary	19 25	Nil.	Nil.	176 35	Nil.	Nil.	Nil.	Nil.	900 85	1,096 45
" extraordinary	630 43	680 06	Nil.	75 61	79 25	480 89	315 81	675 27	1,155 21	4,092 53
Totals	1,505 20	1,681 41	1,441 31	1,956 39	930 76	637 17	345 31	923 82	2,248 28	11,669 65

DREDGE 'CANADA.'

Wages	436 52	437 00	548 91	500 05	436 66	434 43	379 08	227 00	257 30	3,656 95
Coal	113 13	95 13	58 87	63 62	92 39	142 84	29 50		49 25	644 73
Provisions	122 55	181 13	151 16	161 00	154 85	141 14	71 15		56 48	1,039 46
Stores	7 10	42 68	29 69	22 96	2 54	31 66	21 07		239 86	397 56
Equipment		121 52							395 34	516 86
Water	3 00		5 40	8 70	4 30	1 35			2 00	24 75
Repairs	1,343 25	94 05		22 22		617 35	659 77	76 94	152 20	2,965 78
Pilotage	56 80	54 00	50 00	54 00	45 45					260 25
Contingencies	5 65	6 89	2 91		6 94	3 40	2 87	1 70	4 62	34 98
Totals	2,088 00	1,032 40	846 94	832 55	743 13	1,372 17	1,163 44	305 64	1,157 05	9,541 32
Working expenses	744 75	938 35	846 94	810 33	743 13	754 82	124 59	Nil.	1,004 85	5,967 76
Repairs, ordinary	40 65	Nil.	Nil.	1 75	Nil.	6 54	Nil.	Nil.	152 20	201 14
" extraordinary	1,502 60	94 05	Nil.	20 47	Nil.	610 81	1,038 85	305 64	Nil.	3,372 42
Totals	2,088 00	1,032 40	846 94	832 55	743 13	1,372 17	1,163 44	305 64	1,157 05	9,541 32

DREDGE 'NEW DOMINION.'

Wages	414 66	414 66	411 85	463 53	413 84	422 71	608 00	664 42	534 71	4,348 38
Coal						271 51	41 88	39 29	78 58	431 26
Provisions	118 35	93 31	111 22	102 66	64 90	87 90	85 53	58 20	70 46	792 53
Stores	18 15		3 60	1 15	1 42				17 10	41 42
Equipment	151 88					40 65			20 92	213 45
Water	12 50					4 00	10 51	20 63	39 50	87 14
Repairs	2 93			74 97	8 00	34 33	230 45	172 82	133 32	656 82
Pilotage						25 00				25 00
Towage	690 00	810 00	720 00	810 00		1,200 00		375 50	596 00	5,201 50
Wharfage						10 00				10 00
Contingencies	4 06	10 00	1 22	1 48	2 99	16 18			1 80	37 73
Totals	1,412 53	1,327 97	1,247 89	1,453 79	491 15	2,112 28	976 37	1,330 86	1,492 39	11,845 23
Working expenses	1,409 60	1,327 97	1,247 89	1,321 19	483 15	2,009 82	151 17	882 46	1,211 57	10,044 82
Repairs, ordinary	2 93	Nil.	Nil.	Nil.	8 00	Nil.	Nil.	Nil.	133 02	143 95
" extraordinary	Nil.	Nil.	Nil.	132 60	Nil.	102 46	825 20	448 40	147 80	1,656 46
Totals	1,412 53	1,327 97	1,247 89	1,453 79	491 15	2,112 28	976 37	1,330 86	1,492 39	11,845 23

CLASSIFICATION of Disbursements of the Dredges in the Maritime Provinces during the Nine Months ending March 31, 1907.

DREDGE 'PRINCE EDWARD.'

ITEMS.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	405 48	409 25	407 47	408 95	436 31	263 40	210 00	220 00	391 00	3,151 86
Coal		83 23			242 66				60 41	386 30
Provisions	77 57		94 55		261 90	86 45	44 22			564 69
Stores	8 16	109 75			328 64		21 91	5 00		473 46
Equipment	6 00				177 51					183 51
Water					54 63	34 00				88 63
Repairs		838 80		487 95	2 00	51 80	97 17		894 42	2,372 14
Towage	750 00	810 00	600 00	650 00	559 23		135 00			3,504 23
Contingencies		11 54		20 10	15 32			20 56	14 95	82 47
Totals	1,247 21	2,262 57	1,102 02	1,567 00	2,078 20	435 65	508 30	245 56	1,360 78	10,807 29
Working expenses	1,247 21	1,423 77	1,102 02	1,079 05	2,076 20	383 85	201 13	25 56	75 36	7,614 15
Repairs, ordinary	Nil.	Nil.	Nil.	Nil.	2 00	Nil.	Nil.	Nil.	815 47	817 47
" extraordinary	Nil.	838 80	Nil.	487 95	Nil.	51 80	307 17	220 00	469 95	2,375 67
Totals	1,247 21	2,262 57	1,102 02	1,567 00	2,078 20	435 65	508 30	245 56	1,360 78	10,807 29

DREDGE 'GEORGE McKENZIE.'

Wages	396 10	405 00	405 00	405 00	389 86	273 48	212 50	208 29		2,900 23
Coal	136 35		74 10			23 31				233 76
Provisions	63 21	10 83	27 19	153 59	258 48	17 23			28 09	558 62
Stores							14 38	26 94	58 28	99 60
Water				52 50		1 00				53 50
Repairs		146 64		93 79	543 70		112 06		516 66	1,412 85
Pilotage			6 00							6 00
Towage	429 63	258 26	449 27	267 60	291 59	236 39	2,030 00	82 36	506 05	4,551 15
Wharfage	20 00				10 00					30 00
Contingencies	1 50		18 79			36 80			5 44	62 53
Totals	1,046 79	820 73	980 35	972 48	1,493 63	588 21	2,368 94	314 30	1,322 81	9,908 24
Working Expenses	1,046 79	674 09	980 35	878 69	949 93	583 21	1,984 38	Nil.	762 98	7,865 42
Repairs, Ordinary	Nil.	Nil.	Nil.	5 00	Nil.	Nil.	Nil.	Nil.	559 83	628 83
" Extraordinary	Nil.	146 64	Nil.	88 79	543 70	Nil.	384 56	314 30	Nil.	1,477 99
Totals	1,046 79	820 73	980 35	972 48	1,493 63	588 21	2,368 94	314 30	1,322 81	9,908 24

DREDGE 'CAPE BRETON.'

Wages	443 85	436 67	445 00	438 09	445 00	417 66	284 81	296 07	373 31	3,580 46
Coal	219 37		193 13			180 00			36 00	628 50
Provisions	97 14	108 02	144 81	159 09	146 06	137 92	22 52	26 90	82 41	924 87
Stores	97 01	81 34					8 10			186 45
Equipment	18 30									18 30
Water							10 00		15 00	25 00
Repairs	1,675 31	395 90		277 67			70 98		2,120 31	4,540 17
Pilotage	10 00									10 00
Towage	360 00	360 00	770 00	765 00	3,090 00	1,830 00	2,540 00			9,715 00
Wharfage	12 00								28 00	40 00
Contingencies	30 31		15 24	15 60	16 86		6 29	2 23	56 84	143 37
Totals	2,963 29	1,381 93	1,568 18	1,655 45	3,697 92	2,565 58	2,942 70	325 20	2,711 87	19,812 12
Working Expenses	1,287 98	986 03	1,568 18	1,377 78	3,697 92	2,565 58	2,871 72	Nil.	218 25	14,573 44
Repairs, Ordinary	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil	Nil.	2,120 31	2,120 31
" Extraordinary	1,675 31	395 90	Nil.	277 67	Nil.	Nil.	70 98	325 20	373 31	3,118 37
Totals	2,96 29	1,381 93	1,568 18	1,655 45	3,697 92	2,565 58	2,942 70	325 20	2,711 87	19,812 12

CLASSIFICATION of Disbursements of the Dredges in the Maritime Provinces during the Nine Months ending June 30, 1907—*Continued.*

DREDGE 'NEW BRUNSWICK.'

ITEMS.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts	$ cts.
Wages	338 50	380 76	337 00	329 45	306 63	439 52	136 00	198 95	490 61	2,957 42
Coal		185 25	8 66	156 75	87 57				5 68	443 91
Provisions	25 01	110 61	130 69	2 40	248 82	5 03				522 56
Stores	13 42	9 03				1 92			7 68	32 05
Equipment	62 24			27 60		58 33				148 17
Water			3 00	1 50					5 25	9 75
Repairs		79 13			82 52	176 22	418 01	51 02	500 36	1,307 26
Towage			1,950 00	459 02	448 58					2,857 60
Contingencies	1 94	1 90	3 88	2 58	1 50					14 80
Totals	441 11	769 68	2,433 23	979 30	1,175 62	681 02	554 01	249 97	1,009 58	8,293 52
Working expenses	441 11	649 79	2,433 23	979 30	1,093 10	65 28	Nil.	Nil.	147 42	5,809 23
Repairs, ordinary	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	430 13	430 13
" extraordinary	Nil.	119 89	Nil.	Nil.	82 52	615 74	554 01	249 97	432 03	2,054 16
Totals	441 11	769 68	2,433 23	979 30	1,175 62	681 02	554 01	249 97	1,009 58	8,293 52

DREDGE 'W. S. FIELDING.'

Wages	928 81	881 38	902 06	937 34	933 83	673 77	482 02	485 03	480 70	6,704 94
Coal	625 66	238 27	501 75	474 00	199 50	11 11		38 06	204 75	2,293 10
Provisions	229 97	197 81	361 62	151 53	439 65	134 64		71 88	82 04	1,669 14
Stores	72 30	345 54	19 25	9 75	12 20	31 10		10 19	132 73	633 06
Equipment	73 18		40 76	88 79						202 73
Water				41 00		60 00			15 00	116 00
Repairs	129 33	1,241 58		182 56		87 20	142 78	203 96	99 60	2,087 01
Pilotage	130 00	88 00	182 90	135 00	130 00	20 00				685 90
Towage	375 00	105 00	420 00	780 00	720 00	180 00			4 00	2,584 00
Contingencies	17 66	13 63	17 58	54 77	20 56	40 04		20 17	11 98	196 39
Totals	2,581 91	3,111 21	2,445 92	2,854 74	2,455 74	1,237 86	624 80	829 29	1,030 80	17,172 27
Working expenses	2,452 58	1,869 63	2,445 92	2,631 18	2,455 74	1,150 66	Nil.	59 77	931 20	13,996 68
Repairs, ordinary	129 33	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	99 60	228 93
" extraordinary	Nil.	1,241 58	Nil.	223 56	Nil.	87 20	624 80	769 52	Nil.	2,946 66
Totals	2,581 91	3,111 21	2,445 92	2,854 74	2,455 74	1,237 86	624 80	829 29	1,030 80	17,172 27

DREDGE 'MONTAGUE.'

Wages			445 00	445 00	445 00	255 00	257 47	280 00	642 39	2,769 86
Coal			359 90	15 15					172 37	547 42
Provisions			213 08	142 33	50 04					405 45
Stores			3 10	6 33	21 76				69 15	100 34
Water			25 50	70 00		18 00			31 25	144 75
Repairs			17 55	97 81		184 29			317 86	617 51
Towage			1,177 09	675 00	700 00	62 50				2,614 59
Wharfage				20 00						20 00
Contingencies			34 11		14 69	11 78			19 60	80 18
Totals	Nil.	Nil.	2,275 33	1,471 62	1,231 49	531 57	257 47	280 00	1,252 62	7,300 10
Working expenses			2,257 78	1,373 81	1,231 49	92 28	Nil.	Nil.	292 37	5,247 73
Repairs, ordinary			17 55	7 74	Nil.	Nil.	Nil.	Nil.	246 70	271 99
" extraordinary			Nil.	90 07	Nil.	439 29	257 47	280 00	713 55	1,780 38
Totals	Nil.	Nil.	2,275 33	1,471 62	1,231 49	531 57	257 47	280 00	1,252 62	7,300 10

CLASSIFICATION of Disbursements of the Dredges in the Maritime Provinces during the Nine Months ending March 31, 1907—*Continued.*

TUG 'RONA.'

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	195 00	195 00	195 00	195 00	195 00	195 00	60 00	82 36	157 68	1,470 04
Coal	89 10		189 52		43 05				34 75	356 42
Provisions	42 74	55 40	64 75	55 86	40 04	19 02			23 24	301 05
Stores	102 79	5 47				5 27			14 81	128 34
Equipment									214 54	214 54
Water				12 74	3 50	3 00				19 24
Repairs									33 17	33 17
Wharfage					10 00					10 00
Contingencies		2 39		4 00		14 10			27 86	48 35
Totals	429 63	258 26	449 27	267 60	291 59	236 39	60 00	82 36	506 05	2,581 15
Working expenses	429 63	258 26	449 27	267 60	291 59	236 39	Nil.	Nil.	462 88	2,395 62
Repairs, ordinary	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	43 17	43 17
" extraordinary	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	60 00	82 36	Nil.	142 26
Totals	429 63	258 26	449 27	267 60	291 59	236 39	60 00	82 36	506 05	2,581 15

CLASSIFICATION AND QUANTITIES of Material removed by Dredges in the Maritime Provinces during the Nine Months ending March 31, 1907.

DREDGE 'ST. LAWRENCE.'

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Hard-pan, logs		700								700
Boulders										
Gravel										350
Clay	350									
Clay and stone										10,325
Sand and rubbish		4,900	5,425							1,050
Sand, very fine			1,050							11,900
Mud	1,400	4,200		6,300						
Totals	1,750	9,800	6,475	6,300	Nil.	Nil.	Nil.	Nil.	Nil.	24,325

DREDGE 'CANADA.'

Mud	1,080	2,610	2,070	1,980	90	1,480	540	Nil.	Nil.	9,850
Totals	1,080	2,610	2,070	1,980	90	1,480	540	Nil.	Nil.	9,850

DREDGE 'NEW DOMINION.'

Gravel, clay and stone	3,560	2,925		7,295	2,950					16,730
Sand, clay, mud and gravel		6,425			2,300					8,725
Sand, clay, stone and gravel		3,350	10,935							14,285
Mud, ordinary and clay			675							675
Sand and mud	1,400									1,400
Mud	1,350						550	2,875	5,950	10,725
Totals	6,310	12,700	11,610	7,295	5,250	Nil.	550	2,875	5,950	52,540

CLASSIFICATION AND QUANTITIES of Material Removed by Dredges in the Maritime Provinces, &c.—*Continued.*

DREDGE 'PRINCE EDWARD.'

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Mud, clay, sand and rock				2,070						2,070
Clay and rock				900	270					1,170
Sand, ordinary										
Sand and mud	6,435		4,455	4,815						15,705
Mud	1,035	12,915	270							14,220
Totals	7,470	12,915	4,725	7,785	270	Nil.	Nil.	Nil.	Nil.	33,165

DREDGE 'GEO. McKENZIE.'

Gravel and clay	1,845	1,165								3,010
Sand, ordinary	5,215	3,286	1,215	5,040						14,756
Mud			1,305							1,305
Totals	7,060	4,451	2,520	5,040	Nil.	Nil.	Nil.	Nil.	Nil.	19,071

DREDGE 'CAPE BRETON.'

Hard-pan and rock				1,000	4,600	2,600				8,200
Rock and clay				2,000		1,000				3,000
Gravel, sand and mud	3,600	8,000	8,000	1,700						21,300
Clay and mud				1,000						1,000
Sand, ordinary	1,600									1,600
Rock, sand and iron ore				1,600						1,600
Mud and stone				600						600
Totals	5,200	8,000	8,000	7,900	4,600	3,600	Nil.	Nil.	Nil.	37,300

DREDGE 'NEW BRUNSWICK.'

Mud and sticks			8,250	11,200	650					20,100
Mud	1,875									1,875
Clay and gravel	2,615			900						3,515
Clay and mud					600					600
Sand, ordinary, and clay	100	2,050								2,150
Sand, very fine, and mud		4,590	1,550							6,140
Mud and logs	2,600			2,950	9,250					14,800
Totals	7,190	6,640	9,800	15,050	10,500	Nil.	Nil.	Nil.	Nil.	49,180

DREDGE 'W. S. FIELDING.'

Rock and mud	1,200									1,200
Sand, gravel and shingle			8,300							8,300
Sand, clay, gravel and stone					3,900					3,900
Sand and stone				13,950						13,950
Stone, ordinary sand and gravel			7,300							7,300
Sand and gravel				17,850						17,850
Mud and sand	27,500	4,550			17,950	1,650				51,650
Totals	28,700	4,550	15,600	31,800	21,850	1,650	Nil.	Nil.	Nil.	104,150

DREDGE 'MONTAGUE.'

Sand					1,900					1,900
Rock and mud				1,000						1,000
Gravel and sand			300							300
Clay, sand and mud			1,800							1,800
Rock and gravel				100						100
Sand and clay			800	4,700						5,500
Sand and mud				9,150						9,150
Mud				700						700
Totals			2,900	15,650	1,900	Nil.	Nil.	Nil.	Nil.	20,450

DETAILS OF DREDGING IN THE MARITIME PROVINCES.

For the Nine Months ended 31st March, 1907.

Dredge.	Locality.	Date.	Time Dredging.	Quantity.	Expenditure at Locality.	Per Cubic Yard for Local Expenditure.	Wintering and Repairs, Equipment and Superintendence.	Total Cost.	Per Cubic Yard for Total Expenditure.
			Hr. Min.	C Yds.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence....	Railway wharf, Pictou Co., N.S.....	July 28 to Aug. 7, 1906.....	36 00	5,950	488 19	0 08·20	1,432 93	1,921 12	0 32·29
	Campbellton, Restigouche Co., N.B..	Aug. 8 to 14, and 19 to Oct. 4, & Oct. 6 to 25, 1906.....	132 20	18,375	2,631 73	0 14·32	7,722 60	10,354 33	0 56·35
Canada.....	Windsor, Hants Co., N.S.....	July 1 to Nov. 5, 1906	117 31	7,830	3,863 85	0 49·34	4,923 79	8,787 64	1 12·23
	Yarmouth, Yarmouth Co., N.S.....	Dec. 20, 1906, to Jan. 5, 1907....	23 16	2,020	549 13	0 27·18	699 75	1,248 88	0 61·82
New Dominion..	St. Andrews, Charlotte Co., N.B ...	July 1 to Dec. 11, 1906	867 35	43,165	7,610 22	0 17·63	1,989 24	9,599 46	0 22 23
	Navy Island Bar, St. John Co., N.B.	Jan. 28 to March 31, 1907.	135 00	9,375	2,267 87	0 24·19	592 80	2,860 67	0 30·51
Prince Edward..	Railway wharf, Charlottetown, P.E.I	July 1 to 23 and Sept. 5 to 24,'06	159 46	8,685	1,823 17	0 20·99	1,815 12	3,638 29	0 41·88
	Falconwood, Queen's Co., P.E.I.....	July 24 to Sept. 4, 1906.....	195 50	14,625	1,947 27	0 13·31	1,938 67	3,885 94	0 26·57
	Pownal " "	Sept. 25 to Nov. 8, 1906	184 21	9,855	1,926 29	0 19·54	1,917 79	3,844 08	0 39·00
Geo. McKenzie..	Mabou, Inverness Co., N.S.	July 1 to Sept. 22, 1906.....	341 30	13,896	2,645 66	0 19·04	2,677 78	5,323 44	0 38·31
	Port Hood "	Sept. 23 to Oct. 31, 1906.....	119 00	5,175	2,534 19	0 48·97	2,564 96	5,099 15	0 98·53
Cape Breton. ...	North Pond, Red Islands, Richmond Co., N.S	July 1 to Oct. 8, 1906	186 00	21,900	7,416 83	0 33·87	4,786 40	12,203 23	0 55·72
	Whitney Pier, Sydney, C.B., N.S....	Oct. 19 to 20, 1906.....	12 00	600	170 86	0 28·47	110 26	281 12	0 46·85
	International Coal Co. Pier, N.S....	Oct. 9 to 18 and 21 to Dec. 18,'06	136 00	14,800	5,078 73	0 34·31	3,277 53	8,356 26	0 56·46
New Brunswick.	Cedars, King's Co., N.B....	July 1 to 11, 1906.....	71 00	3,950	381 67	0 09·66	279 62	661 29	0 16·74
	Evandale "	July 12, 1906.....	7 00	75	38 79	0 51·72	28 39	67 18	0 89·57
	Hampstead, Queen's Co., N.B.....	July 13 to 18, 1906.....	51 00	1,200	231 65	0 19·30	169 71	401 36	0 33·44
	Belyea's wharf "	July 19 to 27, 1906.....	72 00	1,865	351 63	0 18·85	257 62	609 25	0 32·66
	Colwell's Creek, Washademoak, Queen's Co., N.B.....	July 28 to Sept. 8, 1906	270 00	8,290	1,476 10	0 17·80	1,081 42	2,557 52	0 30·85
	Oak Point, King's Co., N.B	Sept. 9 to Oct. 8, 1906.....	57 30	12,100	1,142 23	0 09·44	836 82	1,979 05	0 16·35
	Victoria wharf, King's Co., N.B.....	Oct. 9 to Nov. 23, 1906	291 00	21,700	1,413 12	0 06·51	1,035 28	2,448 40	0 11·28
W. S. Fielding..	Yarmouth, Yarmouth Co., N.S.....	July 1 to Aug. 3, 1906.....	53 58	33,250	2,546 61	0 07·66	1,932 66	4,479 27	0 13·47
	Pictou Bar, Pictou Co., N.S.....	Sept. 1 to Dec. 4, 1906	147 05	70,900	7,725 81	0 10·89	5,858 62	13,584 43	0 19·16
Montague	Victoria, Crapaud, Queen's Co., P.E.I.	Sept. 6 to Nov. 14, 1906.....	253 30	20,450	4,277 14	0 20·91	3,401 92	7,679 06	0 37·55
			4,020 12	350,031	60,538 74	0 17·29	51,331 68	111,870 42	0 31·96

Expenditure for Dredging in Nova Scotia for the Thirty-fifth Year ended March 31, 1907.

County.	Locality.	Total for the Thirty-four Years ended June 30, 1906.			For the Nine Months 1906-07.			Total Quantity.	Total Cost.	Cost for each County.
		Quantity.	Cost.	Cost for County.	Quantity.	Cost.	Cost for County.			
		Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.
Antigonish	Antigonish	22,025	3,649 15					22,025	3,649 15	
	Harbour au Bouche	59,243	19,703 33					59,243	19,703 33	
	Tracadie	12,245	5,530 29					12,245	5,530 29	
	McNair's Cove	11,265	10,035 68					11,265	10,035 68	
	Bayfield	12,871	9,505 79					12,871	9,505 79	
	Arisaig	8,330	7,452 26					8,330	7,452 26	
	Cribbon's Point	4,675	4,125 19	60,001 69				4,675	4,125 19	60,001 69
Annapolis	Annapolis	2,825	1,635 68	1,635 68				2,825	1,635 68	1,635 68
Cape Breton	Lingan	22,267	9,275 56					22,267	9,275 56	
	Sydney	62,917	20,904 88					62,917	20,904 88	
	Little Glace Bay	46,450	16,936 02					46,450	16,936 02	
	Port Caledonia	17,413	8,242 21					17,413	8,242 21	
	Benacadie Pond	20,860	5,993 90					20,860	5,993 90	
	Christmas Island	19,045	3,364 98					19,045	3,364 98	
	Cow Bay	3,255	1,892 32					3,255	1,892 32	
	Main à Dieu	4,680	2,720 76					4,680	2,720 76	
	Louisburg	23,310	5,480 52					23,310	5,480 52	
	North Sydney (Coal&Steel Co)	54,490	13,143 92					54,490	13,143 92	
	" Salter's Wharf	3,045	505 58					3,045	505 58	
	" Ballast Pier	2,625	364 03					2,625	364 03	
	" Vought's Wharf	1,470	204 52					1,470	204 52	
	" Ingraham's "	1,680	275 85					1,680	275 85	
	" Ballast Heaps	2,205	165 65					2,205	165 65	
	Sydney (Internat'l. Coal Pier)				14,800	8,356 26		14,800	8,356 26	
	" (Whitney Pier)			89,470 70	600	281 12	8,637 38	600	281 12	98,108 08
Colchester	Tatamagouche	65,480	20,373 07	20,373 07				65,480	20,373 07	20,373 07
Cumberland	Parrsboro	42,595	12,804 68					42,595	12,804 68	
	Wallace	93,865	24,140 37	36,945 05				93,865	24,140 37	36,945 05
Digby	Digby	55,740	11,009 10					55,740	11,009 10	
	Weymouth	88	28 62	11,037 72				93,865	28 62	11,037 72
Guysboro	Guysboro	5,400	1,413 53					5,400	1,413 53	
	Larry's River	47,655	16,519 85					47,655	16,519 85	
	Port Mulgrave	4,347	2,494 81					4,347	2,494 81	
	Sherbrooke	1,260	496 49					1,260	496 49	
	Cooks Cove	16,815	7,336 29					16,815	7,336 29	
	St. Mary's River	81,812	22,352 04					81,812	22,352 04	

EXPENDITURE for Dredging in Nova Scotia for the Thirty-fifth Year ended March 31, 1907—*Continued.*

County	Locality.	TOTAL FOR THE THIRTY-FOUR YEARS ENDED JUNE 30, 1906.			FOR THE NINE MONTHS 1906-1907.			Total Quantity.	Total cost.	Cost for each County.
		Quantity.	Cost.	Cost for County.	Quantity.	Cost.	Cost for County.			
		Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.
Guysboro'—*Con.*	Tickle Passage, Little Canso..	3,015	4,477 97					3,015	4,477 97	
	Bar, Sonora, St. Mary's River.	5,628	2,204 33	57,295 31				5,628	2,204 33	57,295 31
Halifax.	Chessetcook	3,920	2,593 71					3,920	2,593 71	
	Halifax Ferry	6,177	2,063 38					6,177	2,063 38	
	Herring Cove	26,101	12,049 68					26,101	12,049 68	
	Ketch Harbour	4,227	1,690 53					4,227	1,690 53	
	Richmond Wharf	792	182 53					792	182 53	
	Roche's Wharf	1,750	620 28					1,750	620 28	
	Halifax Railway Terminus	35,565	11,056 79					35,565	11,056 79	
	Jeddore	21,515	4,958 56					21,515	4,958 56	
	North West Arm	7,350	2,970 39					7,350	2,970 39	
	Cunard's Wharf	1,400	530 04					1,400	530 04	
	Salmon River	14,288	5,962 93					14,288	5,962 93	
	Spry Bay	10,665	3,075 72					10,665	3,075 72	
	Eastern Passage	2,070	596 97					2,070	596 97	
	Sambro	4,815	1,388 61	49,740 12				4,815	1,388 61	49,740 12
Inverness.	Whycocomagh	19,760	3,491 31					19,760	3,491 31	
	Campbell's Pond	4,940	872 83					4,940	872 83	
	Port Hastings	270	190 37					270	190 37	
	Cheticamp	206,275	71,409 02					206,275	71,409 02	
	Mabou	312,904	76,900 82		13,896	5,323 44		326,800	82,124 26	
	Port Hood	10,103	5,696 99		5,175	5,099 15		15,278	10,796 14	
	Grand Etang	10,980	3,431 25	161,992 59			10,422 59	10,980	3,431 25	172,315 18
Lunenburg	Lunenburg	70,510	22,194 57					70,510	22,194 57	
	Mahone Bay	58,019	15,089 29					58,019	15,089 29	
	Vogler's Cove	11,600	5,075 53	42,359 39				11,600	5,075 53	42,359 39
Pictou	Acadia Coal Co. Wharf	22,460	5,262 26					22,460	5,262 26	
	Albion Mines	9,475	2,181 25					9,475	2,181 25	
	East River	144,407	47,696 43					144,407	47,696 43	
	Halifax Coal Co. Wharf	1,650	359 90					1,650	359 90	
	Pictou, Pub. Market Wharf	114,600	27,368 22					114,600	27,368 22	
	" Railway "	86,699	22,752 67		5,950	1,921 12		92,649	24,673 79	
	" Landing R'y. "	48,645	8,898 40					48,645	8,898 40	
	" Steam Ferry Co. Slip.	720	246 18					720	246 18	
	" Bar	42,700	4,153 25		70,900	13,584 43		113,600	17,737 68	
	" Hogg, Craig & Co. Wf.	6,090	1,204 29					6,090	1,204 29	

	" Burnham & Morrell	1,050	211 19					1,050	211 19	
	Vale Colliery	1,395	682 15					1,395	682 15	
	River John	85,173	22,243 98					85,173	22,243 98	
	Granton	25,110	10,707 59					25,110	10,707 59	
	New Glasgow	35,445	11,795 79					35,445	11,795 79	
	Middle River	15,060	4,984 40					15,060	4,984 40	
	C. Dwyer's Wharf	5,400	1,087 66					5,400	1,087 66	
	" Berths for S. S. 'Campania'	5,850	2,000 22					5,850	2,000 22	
	Dwyer & Co.'s Wharf	360	123 09					360	123 09	
	Intercolonial Coal Mining Co.	46,900	7,410 86	181,369 78			15,505 55	46,900	7,410 86	196,875 33
	East River, Pictou									
Queen's	Liverpool	82,230	31,944 10					82,230	31,944 10	
	Port Mouton	10,620	2,283 77	34,227 87				10,620	2,283 77	34,227 87
Richmond	D'Escousse	23,650	10,052 76					23,650	10,052 76	
	St. Peter's Canal	90,830	27,435 95					90,830	27,435 95	
	St. Peter's	7,150	2,407 41					7,150	2,407 41	
	Grand Goulet	23,584	5,570 49					23,584	5,570 49	
	River Bourgeois	18,920	4,468 87					18,920	4,468 87	
	Marine Slip	320	56 53					320	56 53	
	Poulemont	10,080	2,566 14					10,080	2,566 14	
	Fourchu Harbour	16,885	9,454 94					16,885	9,454 94	
	North Pond, Red Islands			62,013 09	21,900	12,203 23	12,203 23	21,900	12,203 23	74,216 32
Shelburne	Lockeport	94,168	22,049 58					94,168	22,049 58	
	Barrington Passage	42,670	13,607 03					42,670	13,607 03	
	Osborne	990	145 31					990	145 31	
	Woods Harbour	1,170	245 45					1,170	245 45	
	Barrington Pub. Wharf	61,020	17,612 09					61,020	17,612 09	
	Sherrow's Channel									
	Shelburne	9,120	3,956 95	57,616 41				9,120	3,956 95	57,616 41
Yarmouth	Yarmouth	505,352	130,417 88		35,270	5,728 15		540,622	136,146 03	
	Milton	663	499 46	130,917 34			5,728 15	663	499 46	136,645 49
Hants	Windsor	5,450	1,627 60	1,627 60	7,830	8,787 64	8,787 64	13,280	10,415 24	10,415 24
Victoria	Aspey Bay	3,820	1,569 95	1,569 95				3,820	1,569 95	1,569 95
Dredge 'C. B.' losses			762 98	762 98					762 98	762 98
	Totals	3,414,378	1,000,956 34	1,000,956 34	1,763,21	61,284 54	61,284 54	3,590,699	1,062,240 88	1,062,240 88

Expenditure for Dredging in New Brunswick for the Thirty-fifth Year ended March 31, 1907.

County.	Locality.	Total for the Thirty-four Years ended June 30, 1906.			For the Nine Months, 1906 07.			Total Quantity.	Total Cost.	Cost for each County
		Quantity.	Cost.	Cost for County.	Quantity.	Cost.	Cost for County.			
		Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.
Charlotte	St. Andrews	22,920	5,685 41	5,685 41	43,165	9,599 46	9,599 46	66,085	15,284 87	15,284 87
Gloucester	Bathurst	98,637	29,095 79					98,637	29,095 79	
	Caraquet	16,485	6,312 23					16,485	6,312 23	
	Shippigan	64,545	21,452 11	56,860 13				64,545	21,452 11	56,860 13
Kent	Richibucto	172,778	53,544 01					172,778	53,544 01	
	Cocagne	27,180	9,601 45					27,180	9,601 45	
	Buctouche	13,005	4,934 24					13,005	4,934 24	
	" Priest's Point	3,510	1,110 70					3,510	1,110 70	
	" Chapel "	4,140	1,310 07					4,140	1,310 07	
	" Robertson's Wharf	45	14 23	70,514 70				45	14 23	70,514 70
King's	Bellisle Point	79,905	13,052 23					79,905	13,052 23	
	Kennebecasis River	116,270	20,081 83					116,270	20,081 83	
	Moss Glen	10,200	1,924 47					10,200	1,924 47	
	Westfield	1,300	362 19					1,300	362 19	
	Glenwood Wharf	28,600	2,417 77					28,600	2,417 77	
	Shamper's "	4,700	703 07					4,700	703 07	
	Jenkin's Cove	13,650	1,720 64					13,650	1,720 64	
	Cedars	15,750	1,287 35		3,950	661 29		19,700	1,948 64	
	Evandale				75	67 18		75	67 18	
	Oak Point				12,100	1,979 05		12,100	1,979 05	
	Victoria Wharf			41,549 55	21,700	2,448 40	5,155 92	21,700	2,448 40	46,705 47
Northumberland	Horse Shoe, Miramichi	208,892	55,058 36					208,892	55,058 36	
	Outer Bar "	29,935	7,965 31					29,935	7,965 31	
	Grand Dune "	37,975	10,121 67					37,975	10,121 67	
	Gordon Flats "	22,425	4,403 95					22,425	4,403 95	
	Neguac	6,300	6,969 76	84,519 05				6,300	6,969 76	84,519 05
Queen's	Grand Lake	215,232	30,085 41					215,232	30,085 41	
	" McNair's Cove	20,440	4,522 82					20,440	4,522 82	
	Jemseg	87,230	17,190 06					87,230	17,190 06	
	Washademoak	65,675	8,073 65					65,675	8,073 65	
	" Cambridge Whf.	2,900	1,073 31					2,900	1,073 31	
	" Ackerley's "	4,840	995 20					4,840	995 20	
	" Huestis "	270	212 72					270	212 72	
	" Webster's "	5,000	764 58					5,000	764 58	
	" Robertson's "	5,750	422 14					5,750	422 14	
	" Colwell's Creek				8,290	2,557 52		8,290	2,557 52	

	Grimross, M . ground	2,040	3,274 99					12,040	3,274 99	
	Gagetown Creek Canal	45,935	7,739 97					45,935	7,739 97	
	Spoon Island	9,315	1,192 36					9,315	1,192 36	
	Ward's Shoal, Salmon River	46,625	4,593 59					46,625	4,593 59	
	Curley Shoal	36,625	3,369 16					36,625	3,369 16	
	Chipman & Brigg's Corner	104,275	12,269 49					104,275	12,269 49	
	Upper Gagetown Wharf	1,700	1,104 90					1,700	1,104 90	
	McClure Shoal	39,525	4,556 66					39,525	4,556 66	
	Queen's Coal Co., Newcastle	14,475	1,335 06					14,475	1,335 06	
	Hampstead				1,200	401 36		1,200	401 36	
	Belyea's Wharf			102,776 0.	1,86	609 25	3,568 13	1,865	609 25	106,344 20
Restigouche	Dalhousie	22,301	6,543 0					22,301	6,543 08	
	" McManus Contract	13,336	1,8 5 6					13,336	1,825 67	
	" Railway Wharf	8,466	1,2 3 4					8,466	1,203 48	
	" Ferry Landing	12,99	3,632 3					12,992	3,632 33	
	" Hilyards	3,85	1,277 7					3,850	1,277 78	
	Traverse	118,860	22,980 6					118,860	22,980 63	
	" Oak Point	2,100	1,020 58					2,100	1,020 58	
	Campbellton, Govt. Wharf	1,750	620 9					1,750	620 96	
	" Contract	9,800	2,254 11					9,800	2,254 11	
	" Basin			41,358 62	18,37	10,354 33	10,354 33	18,375	10,354 33	51,712 95
t. John	I. C. Ry. Terminus	212,242	52,633 18					212,242	52,633 18	
	Navy Island	25,291	9,296 79		9,375	2,860 67		34,699	12,157 46	
	Marble Cove	29,925	4,374 40					29,925	4,374 40	
	Murray's Mills	27,555	3 681 11					27,555	3,681 41	
	Indiantown Wharf	1,615	192 83					1,615	192 83	
	Long "	7,137	2,680 24					7,137	2,680 24	
	Miller & Woodman's	9,275	1,090 42					9,275	1,090 42	
	Hayford & Stetson	8,015	942 29					8,015	942 29	
	Indiantown Wharf	450	52 90					450	52 90	
	Adam's "	7,315	3,247 29					7,315	3,247 29	
	Anchor Line	4,695	996 81					4,695	996 81	
	Dominion Atlantic Wharf	15,525	4,484 72					15,525	4,484 72	
	St. John, Winter Berths	439,503	81,451 16					439,503	81,451 16	
	" Harbour Channel	3,413	5,063 92					3,413	5,063 92	
	Purves & Murchie Mills	675	142 57					675	142 57	
	McAvity Wharf	4,110	606 88					4,110	606 88	
	Lawton's "	570	101 46					570	101 46	
	Thorne "	1,980	249 02					1,980	249 02	
	Maritime Nail Co. Wharf	1,425	224 52					1,425	224 52	
	Cushing's Mills	20,850	1,222 86					20,850	1,222 86	
	Hilyard Bros	1,400	314 10					1,400	314 10	
	Kennebecasis River	2,025	604 37					2,025	604 37	
	Partridge Island	4,650	2,294 22					4,650	2,294 22	
	" Channel for water pipe	8,215	5,173 82	181,122 18			2,860 67	8,215	5,173 82	183,982 85
Sunbury	Oromocto	395,447	66,427 58					395,447	66,427 58	
	McLean Wharf	625	181 59					625	181 59	
	Ox Island	51,800	5,266 50					51,800	5,266 50	
	French Lake	25,475	3,787 49					25,475	3,787 49	
	Bent's Wharf, Maugerville	2,310	428 44					2,310	428 44	

EXPENDITURE for Dredging in New Brunswick for the Thirty-fifth Year ended March 31, 1907—*Continued.*

County.	Locality.	TOTAL FOR THE THIRTY-FOUR YEARS ENDED JUNE 30, 1906.			FOR THE NINE MONTHS, 1906-07.			Total Quantity.	Total Cost.	Cost for each County
		Quantity.	Cost.	Cost for County.	Quantity.	Cost.	Cost for County.			
		Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.
Sunbury—*Con.*	Upper Sheffield	3,830	425 15	76,516 75				3,830	425 15	76,516 75
Westmoreland	Point du Chene	182,980	42,162 18					182,980	42,162 18	
	Cape Tormentine	35,120	9,004 92	51,167 10				35,120	9,004 92	51,167 10
York	Fredericton	126,365	21,679 06					126,365	21,679 06	
	St. Mary's Ferry	15,570	6,827 36					15,570	6,827 36	
	Gibson	30,395	4,379 52					30,395	4,379 52	
	Nashwaak	1,600	435 22					1,600	435 22	
	Fisher & Chestnut Shoals	8,200	1,547 12					8,200	1,547 12	
	Canada Eastern Railway Whf.	3,970	1,013 98					3,970	1,013 98	
	Springhill, Chapel & Russel Bars	96,295	24,386 78					96,295	24,386 78	
	Robinson's Bar	6,965	1,717 16					6,965	1,717 16	
	Douglas Booms	14,235	1,512 87	63,499 07				14,235	1,512 87	63,499 07
	'New Brunswick' equipment		1,591 12	1,591 12					1,591 12	1,591 12
Totals		3,794,757	777,159 75	777,159 75	120,095	31,538 51	31,538 51	3,914,852	808,698 26	808,698 26

Expenditure for Dredging in Prince Edward Island for the Thirty-fifth Year ending March 31, 1907.

County.	Locality.	Total for the Thirty-four Years ended June 30, 1906.			For the Nine Months, 1906-07.			Total Quantity.	Total Cost.	Cost for each County.
		Quantity.	Cost.	Cost for County.	Quantity.	Cost.	Cost for County.			
		Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.
King's	Grand River	76,170	15,304 04					76,170	15,304 04	
	Montague River	182,295	36,547 47					182,295	36,547 47	
	Murray Harbour South	101,253	18,147 03					101,253	18,147 03	
	Sturgeon	16,026	6,066 27					16,026	6,066 27	
	St. Mary's Wharf	21,963	4,752 55					21,963	4,752 55	
	Georgetown Ry. Wharf	1,002	408 32					1,002	408 32	
	" Queen's Wharf	2,205	1,328 80					2,205	1,328 80	
	Cardigan Bridge	35,955	8,619 36					35,955	8,619 36	
	Newport	3,240	917 82					3,240	917 82	
	Souris	3,825	1,083 53					3,825	1,083 53	
	Murray River	43,447	11,985 49					43,447	11,985 49	
	" Railway	5,926	1,860 30					5,926	1,860 30	
	Morell	43,335	11,972 59	118,993 57				43,335	11,972 59	118,993 57
Queen's	Charlottetown Ry. Wharf	116,706	30,318 31		8,685	3,638 29		125,391	33,956 60	
	" Pownal	23,710	4,944 28					23,710	4,944 28	
	" Ferry	10,075	2,006 99					10,075	2,006 99	
	" Steam Nav. Co	13,113	5,491 77					13,113	5,491 77	
	" Connolly Whf.	9,978	4,409 68					9,978	4,409 68	
	" Peake Bros.	13,995	5,856 02					13,995	5,856 02	
	" Queen St. Slip	3,915	1,109 03					3,915	1,109 03	
	" Geo. Peake's Wharf	6,885	2,232 03					6,885	2,232 03	
	" Poole Wharf	12,240	1,609 95					12,240	1,609 95	
	" McMillan "	6,165	1,320 13					6,165	1,320 13	
	" Dom. Building Sewer	5,355	1,146 68					5,355	1,146 68	
	" Pub. Sewerage	2,880	679 12					2,880	679 12	
	" Geo. E. Full's Wharf	11,520	3,001 96					11,520	3,001 96	
	" Carvell Bros.	2,880	798 04					2,880	798 04	
	" Falconwood Asylum Whf				14,625	3,885 94		14,625	3,885 94	
	Webster's Corner, East River	203	43 47					203	43 47	
	Crapaud, Victoria	118,040	34,574 90		20,450	7,679 06		138,490	42,253 96	
	Pownal Bay	33,610	6,536 20		9,855	3,844 08		43,465	10,380 28	

EXPENDITURE for Dredging in Prince Edward Island for the Thirty-fifth Year ending March 31, 1907—*Concluded.*

County.	Locality.	TOTAL FOR THE THIRTY-FOUR YEARS ENDED JUNE 30, 1906.			FOR THE NINE MONTHS, 1906-07.			Total Quantity.	Total Cost.	Cost for each County.
		Quantity.	Cost.	Cost for County.	Quantity.	Cost.	Cost for County.			
		Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.	Cubic yards.	$ cts.	$ cts.
Queen's—*Con*	Rock Point	82,920	13,426 13					82,920	13,426 13	
	Vernon River	25,240	8,292 55					25,240	8,292 55	
	Wood Islands	8,405	11,801 57					8,405	11,801 57	
	Nine Mile Creek	31,650	6,286 46					31,650	6,286 46	
	Hickey Wharf	750	150 51					750	150 51	
	Carr's Point	12,165	2,441 28					12,165	2,441 28	
	Pinette	3,825	756 24					3,825	756 24	
	Fort Augustus	3,195	631 68					3,195	631 68	
	Southport Ferry	45,300	7,508 75					45,300	7,508 75	
	Red Point	7,161	3,879 60					7,161	3,879 60	
	North Rustico	13,536	4,775 38					13,536	4,775 38	
	South Rustico	11,649	4,109 67					11,649	4,109 67	
	Gauthier's Creek	17,847	8,305 50					17,847	8,305 50	
	French River	41,671	13,311 46					41,671	13,311 46	
	Malpeque	28,575	3,483 32					28,575	3,483 32	
	Bay View	4,095	1,912 87					4,095	1,912 77	
	Wedlocks	1,260	520 48					1,260	520 48	
	Belfast, Halliday's Wharf	15,435	4,468 78	202,410 79			19,047 37	15,435	4,468 78	221,458 16
Prince	Summerside	91,571	28,032 51					91,571	28,032 51	
	Hurd's Point Pier	65,505	14,315 47					65,505	14,315 47	
	Tignish	11,387	13,005 45					11,387	13,005 45	
	Cascumpec	1,157	538 42					1,157	538 42	
	Cape Traverse	16,740	5,105 89					16,740	5,105 89	
	Holman's Wharf	9,585	1,269 21	62,266 95				9,585	1,269 21	62,266 95
	Totals	1,479,483	383,671 31	383,671 31	53,615	19,047 37	19,047 37	1,533,098	402,718 68	402,718 68

Expenditure for Dredging in Quebec for the Thirty-fifth Year ended March 31, 1907.

From appropriations Maritime Provinces.

Magdalen Islands, Gaspé Co.	House Harbour	6,800	2,392 92					6,800	2,392 92		
Magdalen Islands, Gaspé Co.	Amherst Harbour	495	242 05	2,634 97				495	242 05	2,634 97	
Temiscouata	River du Loup	2,587	825 47	825 47				2,587	825 47	825 47	
Rimouski	Rimouski	8,123	3,997 59	3,997 59				8,123	3,997 59	3,997 59	
		18,005	7,458 03	7,458 03				18,005	7,458 03	7,458 03	

Statement of Dredging showing Quantities Removed by Hand in each Province and Cost of each Dredging for the Thirty-fifth Year ended March 31, 1907.

Fiscal Year.	New Brunswick.		Nova Scotia.		Quebec.		Prince Edward Island.		Total Quantity, Cubic Yards.	Total Expenditure.	Cost per Cubic Yard.
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.			
		$ cts.		$ cts.		$ cts.		$ cts.		$ cts.	$ cts.
1878-9			245	553 13					245	553 13	0 26 58
1879-1880			12,370	3,666 90					12,370	3,666 90	0 29 64
1880-1			11,140	2,560 25					11,140	2,560 25	0 22 98
1881-2			10,640	2,650 00					10,640	2,650 00	0 24 90
1882-3			8,190	2,500 00					8,190	2,500 00	0 30 52
1883-4			5,460	2,500 00					5,460	2,500 00	0 45 78
1899-1900			343	248 71					343	248 71	0 72 51
1900-1			320	250 75					320	250 75	0 78 35
1902-3			1,645	496 38					1,645	496 38	0 30 17
Totals			50,353	15,428 12					50,353	15,428 12	0 30 64

STATEMENT of Dredging, showing Quantities Removed in each Province, and Cost of each Work for the Thirty-fifth Year ended March 31, 1907.

Fiscal Year.	New Brunswick.		Nova Scotia.		Quebec.		Prince Edward Island.		Total Quantity, Cubic Yards.	Total Expenditure.	Cost per Cubic Yard.
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.			
		$ cts.		$ cts.		$ cts.		$ cts.		$ cts.	$ cts.
1872-3	38,060	13,240 50	23,260	8,422 70					61,320	21,663 20	0. 35 328
1873-4	57,725	14,395 57	18,600	6,545 61	6,800	2,392 92			83,125	23,334 10	0. 28 71
1874-5	78,223	17,325 05	24,416	13,238 83			18,655	9,892 89	121,294	40,456 77	0. 33 35
1875-6	79,935	17,040 52	91,975	21,855 90			58,283	10,891 80	230,192	49,818 22	0. 21 642
1876-7	97,690	23,161 90	127,785	34,846 74			74,460	12,758 27	299,935	70,766 91	0. 23 594
1877-8	81,070	23,323 92	106,857	29,607 94			82,860	12,011 18	270,787	64,943 04	0. 23 983
1878-9	132,555	27,400 22	116,307	28,267 59			46,490	9,164 07	295,352	64,831 88	0 21 951
1879-1880	63,540	16,581 79	127,684	34,765 84			36,390	12,674 98	228,379	64,396 69	0 28 197
1880-1	44,315	12,385 85	87,118	23,061 64	765	374 08	46,335	9,298 53	180,085	45,439 46	0 25 232
1881-2	79,640	18,626 87	89,566	33,363 71	2,317	673 44	47,325	9,356 57	216,531	61,347 15	0. 28 331
1882-3	48,565	13,422 70	143,616	32,996 93			68,535	11,080 37	260,716	67,560 00	0. 25 890
1883-4	47,058	17,103 38	157,560	49,050 58			79,750	13,355 05	284,368	79,509 01	0. 27 959
1884-5	128,997	24,460 35	76,164	25,250 73			55,075	8,668 01	268,359	62,376 68	0. 23 242
1885-6	68,505	14,874 63	56,790	21,482 05	8,123	3,997 59	17,137	10,349 66	142,432	46,706 34	0. 32 793
1886 7	69,440	11,452 86	53,400	25,621 19			6,137	6,214 74	128,977	43,288 79	0. 33 56
1887 8	50,152	9,252 50	84,175	29,847 60			3,775	5,899 90	138,102	45,000 00	0. 32 58
1888 9	63,633	16,598 08	56,910	32,697 00			24,240	15,502 95	144,783	64,798 03	0. 27 29
1889-1890	86,068	20,544 93	59,783	22,821 55			31,422	11,085 39	177,273	54,451 87	0 30 71
1890-1	96,588	20,375 06	61,698	24,386 57			19,004	8,843 92	177,290	53,605 55	0. 30 23
1891 2	75,023	20,592 85	81,993	27,376 08			31,382	12,788 34	188,398	60,757 27	0. 32 249
1892 3	108,035	23,742 26	40,834	18,125 58			66,585	15,112 83	215,354	56,980 67	0. 26 44
1893-4	77,505	21,564 27	59,581	28,664 99			61,536	12,269 24	198,622	62,498 50	0. 31 46
1894 5	59,715	13,630 11	105,463	32,202 70			48,060	10,428 90	213,238	56,261 71	0. 26 38
1895 6	98,905	21,352 63	36,428	15,828 89			36,360	10,299 93	171,693	47,481 45	0. 27 65
1896 7	203,975	34,050 86	84,735	22,080 46			51,078	10,937 62	339,788	67,368 94	0. 19 73
1897 8	187,325	27,611 17	147,085	31,497 57			46,710	10,701 49	381,120	69,810 23	0. 18 31
1898 9	105,058	23,315 82	155,510	36,628 81			51,040	13,283 71	311,608	73,228 34	0. 23 50
1899-1900	175,935	28,232 46	152,033	37,589 22			94,364	17,537 73	422,332	83,359 41	0. 19 76
1900-1	205,369	32,615 29	94,557	36,141 17			26,020	18,984 13	325,946	87,740 59	0. 26 91
1901-2	218,210	28,508 97	143,142	39,247 35			51,320	16,196 95	405,682	83,953 27	0. 20 69
1902-3	197,207	36,195 40	134,648	32,856 93			55,943	16,160 33	387,798	85,212 66	0. 21 97
1903-4	252,725	53,046 12	94,675	34,171 45			49,500	13,775 37	396,900	100,992 94	0. 25 44
1904-5	193,955	46,348 89	203,460	33,359 47			33,030	17,123 82	430,445	96,832 18	0. 22 49
1905-6	224,058	32,549 89	271,637	36,111 20			60,683	11,089 96	556,377	120,072 24	0. 21 58
1906 7	120,095	31,538 51	176,321	61,284 54			53,615	19,047 37	350,031	111,870 42	0. 31 96
Totals	3,913,854	806,462 18	3,545,765	1,031,327 11	18,005	7,458 03	1,533,099	402,786 00	9,004,732	2,288,354 51	0. 25 41

STATEMENT of dredging in the Maritime Provinces showing quantities removed by and expenditure of each dredge during the thirty-four years and nine months ending March 31, 1907.

Dredge.	TOTAL QUANTITIES AND COST FOR THIRTY-FOUR YEARS ENDING JUNE 30, 1906.			NINE MONTHS 1906-07.			TOTAL FOR THIRTY-FOUR YEARS AND NINE MONTHS ENDED MARCH 31, 1907.		
	Total Quantity.	Cost.	Per cubic yard.	Quantity.	Cost.	Per cubic yard.	Total Quantity.	Total cost.	Cost per cubic yard.
		$ cts.	$ cts.		$ cts.	$ cts.		$ cts.	$ cts.
St. Lawrence	1,685,619	427,298 43	0 25 35	24,325	12,275 45	0 50 46	1,709,944	439,573 88	0 25 70
Canada	1,102,589	345,656 01	0 31 34	9,850	10,036 52	1 01 89	1,112,439	355,692 53	0 31 97
New Dominion	1,798,087	314,212 86	0 17 47	52,540	12,460 13	0 23 71	1,850,627	326,672 99	0 17 65
Prince Edward	1,443,123	382,879 25	0 26 53	33,165	11,368 31	0 34 27	1,476,288	394,247 56	0 26 69
(Old) Cape Breton	534,938	139,074 33	0 25 99				534,938	139,074 33	0 25 99
Geo. McKenzie	777,802	324,023 00	0 41 66	19,071	10,422 59	0 54 65	796,873	33,445 59	0 43 22
Cape Breton	853,650	141,546 76	0 16 58	37,300	20,840 61	0 55 88	890,950	162,387 37	0 41 65
New Brunswick	363,545	79,339 29	0 21 82	49,180	8,724 05	0 17 73	412,725	88,063 34	0 21 33
W. S. Fielding	83,440	15,956 57	0 19 12	104,150	18,063 70	0 17 34	187,590	34,020 27	0 18 13
Montague				20,450	7,679 06	0 37 55	20,450	7,679 06	0 37 55
	8,642,793	2,169,986 50	0 25 11	350,031	111,870 42	0 31 96	8,992,824	2,281,856 92	0 25 37

STATEMENT of dredging performed by hand in the Maritime Provinces showing quantities removed and expenditure at each locality for thirty-four years and nine months ending March 31, 1907.

Locality.	TOTAL QUANTITIES AND COST FOR THIRTY-FOUR YEARS ENDING JUNE 30, 1906.			NINE MONTHS 1906-07.			Total Quantity.	Total cost.	Cost per cubic yard.
	Total Quantity.	Cost.	Per cubic yard.	Quantity.	Cost.	Per cubic yard.			
		$ cts.	$ cts.		$ cts.	$ cts.		$ cts.	$ cts.
Parrsboro, N.S.	42,595	12,804 68	0 30 06				42,595	12,804 68	0 30 06
Windsor, "	5,450	1,627 60	0 29 86				5,450	1,627 60	0 29 86
Milton, "	663	499 46	0 75 33				663	499 46	0 75 33
Racquette, "	1,645	496 38	0 30 17				1,645	496 38	0 30 17
	50,353	15,428 12	0 30 64				50,353	15,428 12	0 30 64

Cost at localities dredged during the nine months ended 31st March, 1907.

DREDGE 'ST. LAWRENCE.'

Locality.	Date.	Actual Dredging Time.	Quantity.	Cost.	Cost per Cubic Yard.
		Hrs. Min.	C. yds.	$ cts.	$ cts.
Railway wharf, Pictou Co., N.S.	28th July to 7th August, 1906	36 00	5,950	488 19	0 08·20
Campbellton, Restigouche Co., N.B.	8th to 14th and 19th Aug. to 4th Oct. and 6th to 25th Oct.	132 20	18,375	2,631 75	0 14·32
DREDGE 'CANADA.'					
Windsor, Hants Co., N.S.	1st July to 5th November, 1906	117 31	7,830	3,863 85	0 49·34
Yarmouth, Yarmouth Co., N.S.	20th December to 5th January, 1907	23 16	2,020	549 13	0 27·18
DREDGE 'NEW DOMINION.'					
St. Andrews, Charlotte Co., N.B.	1st July to 11th December, 1906	867 35	43,165	7,610 22	0 17·63
Navy Island Bar, St. John, N.B.	28th January to 31st March, 1907	135 00	9,375	2,267 87	0 24·19
DREDGE 'PRINCE EDWARD.'					
Railway wharf, Charlottetown, P.E.I.	1st to 23rd July and 5th to 24th Sept., 1906	159 46	8,685	1,823 17	0 20·99
Falconwood, Queen's Co., P.E.I.	24th July to 4th Sept., 1906	195 50	14,625	1,947 27	0 13·31
Pownal, Queen's Co., P.E.I.	25th Sept. to 8th Nov., 1906	184 21	9,855	1,926 29	0 19 54
DREDGE 'GEO. McKENZIE.'					
Mabou, Inverness Co., N.S.	1st July to 22nd Sept., 1906	341 30	13,896	2,645 66	0 19·04
Port Hood, Inverness Co., N.S.	23rd September to 31st October, 1906.	119 00	5,175	2,534 19	0 48·97

Cost at localities dredged during the nine months ended 31st March, 1907.

DREDGE 'CAPE BRETON.'

Locality.	Date.	Actual Dredging Time.	Quantity.	Cost.	Cost per Cubic Yard.
		Hrs. Min.	C. yds.	$ cts.	$ cts.
North Pond, Red Islands, Richmond Co., N.S	1st July to 8th October, 1906	186 00	21,900	7,416 83	0 33·87
Whitney pier, Sydney, C. B. County	19th and 20th October, 1906	12 00	600	170 86	0 28·47
Steel and Coal Co., Sydney, C. B. County	9th to 18th and 21st October to 18th December, 1906	136 00	14,800	5,078 73	0 34·31

DREDGE 'NEW BRUNSWICK.'

Cedars, King's Co., N.B	1st to 11th July, 1906	71 00	3,950	381 67	0 09·66
Evandale, King's Co., N.B	12th July 1906	7 00	75	38 79	0 51·72
Hampstead, Queen's Co., N.B	13th to 18th July, 1906	51 00	1,200	231 65	0 19·30
Belyea's wharf, Queen's Co., N.B	19th to 27th July, 1906	72 00	1,865	351 63	0 18·85
Colwell's Creek, Washademoak, Queen's Co., N.B	28th July to 8th Sept., 1906	270 00	8,290	1,476 10	0 17·80
Oak Point, King's Co., N.B	9th Sept. to 8th Oct., 1906	57 30	12,100	1,142 23	0 09·44
Victoria wharf, King's Co., N.B	9th Oct. to 23rd Nov., 1906	291 00	21,700	1,413 12	0 06·51

DREDGE 'W. S. FIELDING.'

Yarmouth, Yarmouth Co., N.S	1st July to 3rd Aug., 1906	53 58	33,250	2,546 61	0 07·66
Pictou Bar, Pictou Co., N.S	1st Sept. to 4th Dec., 1906	147 05	70,900	7,725 81	0 10·89

DREDGE 'MONTAGUE.'

Victoria, Crapaud, Queen's Co., P.E.I	6th Sept. to 14th Nov., 1906	253 30	20,450	4,277 14	0 20·91

COST AT LOCALITIES DREDGED IN THE MARITIME PROVINCES.

During the Nine months ended March 31, 1907.

Dredge.	Locality.	Date.	Time Dredging.	Quantity.	Cost.	Cost per Cubic Yard.
			Hrs. Min.	C. yds.	$ cts.	$ cts.
St. Lawrence	Railway wharf, Pictou, N.S	July 28 to Aug. 7, 1906	36 00	5,950	488 19	0 08·20
	Campbellton, Restigouche Co., N.B.	Aug. 8 to 14, 19 to Oct. 4, and 6 to 25, 1906	132 20	18,375	2,631 73	0 14·32
Canada	Windsor, Hants Co., N.S.	July 1 to Nov. 5, 1906	117 31	7,830	3,863 85	0 49·34
	Yarmouth, Yarmouth Co., N.S.	Dec. 20, 1906, to Jan. 5, 1907	23 16	2,020	549 13	0 27·18
New Dominion	St. Andrews, Charlotte Co., N.B.	July 1 to Dec. 11, 1906	867 35	43,165	7,610 22	0 17·63
	Navy Island Bar, St. John Co., N.B.	Jan. 28 to March 31, 1907	135 00	9,375	2,267 87	0 24·19
Prince Edward	Railway wharf, Charlottetown, Queen's Co., P.E.I	July 1 to 23 and Sept. 5 to 24, 1906	159 46	8,685	1,823 17	0 20·99
	Falconwood, Queen's Co., P.E.I	July 24 to Sept. 4, 1906	195 50	14,625	1,947 27	0 13·31
	Pownal	Sept. 20 to Nov. 8, 1906	184 21	9,855	1,926 29	0 19·54
Geo. McKenzie	Mabou, Inverness Co., N.S.	July 1 to Sept. 22, 1906	341 30	13,896	2,645 66	0 19·04
	Port Hood	Sept. 23 to Oct. 31, 1906	119 00	5,175	2,534 19	0 48·97
Cape Breton	North Pond, Red Islands, Richmond Co., N.S.	July 1 to Oct. 8, 1906	186 00	21,900	7,416 83	0 33·87
	Whitney Pier, Sydney, Cape Breton Co., N.S.	Oct. 19 and 20, 1906	12 00	600	170 86	0 28·47
	Steel & Coal Co., Sydney, Cape Breton Co., N.S.	Oct. 9 to 18, and 21 to Dec. 18, 1906	136 00	14,800	5,078 73	0 34 31
New Brunswick	Cedars, King's Co., N.B.	July 1 to 11, 1906	71 00	3,950	381 67	0 09 66
	Evandale, King's Co., N.B.	July 12, 1906	7 00	75	38 79	0 51·72
	Hampstead, Queen's Co, N.B.	July 13 to 18, 1906	51 00	1,200	231 65	0 19·30
	Belyea's wharf, Queen's Co., N.B.	July 19 to 27, 1906	72 00	1,865	351 63	0 18·85
	Colwell's Creeks, Washademoak, Queen's Co., N.B	July 28 to Sept. 8, 1906	270 00	8,290	1,476 10	0 17·80
	Oak Point, King's Co., N.B.	Sept. 9 to Oct. 8, 1906	57 30	12,100	1,142 23	0 09·44
	Victoria wharf, King's Co., N.B.	Oct. 9 to Nov. 23, 1906	291 00	21,700	1,413 12	0·06·51
W. S. Fielding	Yarmouth, Yarmouth Co., N.S.	July 1 to Aug. 3, 1906	53 58	33,250	2,546 61	0 07·66
	Pictou Bar, Pictou Co., N.S.	Sept. 1 to Dec. 4, 1906	147 05	70,900	7,725 81	0 10·89
Montague	Victoria, Crapaud, Queen's Co., P.E.I.	Sept. 6 to Nov. 14, 1906	253 30	20,450	4,277 14	0 20·91

PROVINCE OF QUEBEC.

DREDGING AT BATISCAN RIVER.

Dredge *No. 6, Prendergast,* worked at this place from July 1 to August 29, 1906. The work done consisted of dredging 800 feet from entrance of St. Lawrence river, at Grogan's mill, below the bridge. The length of cut made was 1,500 feet long, 50 feet wide and 10 feet deep below zero. The quantity of material removed was 56,200 cubic yards of clay and sand.

DREDGING AT BEAUHARNOIS.

From July 1 to November 24, 1906, the close of navigation, the dredge *Quebec* worked at this place, dredging at Thibaudeau's Point, at the entrance of River St. Louis, making a channel 150 feet wide and 8 feet deep below zero, and 2,000 feet long. This work is intended to make an outlet to Lake St. Louis to clean out corrupted water coming from woollen factories. Work was also performed at Kilgour's wharf, at the village, deepening to ten feet at low water at the wharf to allow different boats to approach. 72,640 cubic yards of clay and rock were removed.

DREDGING AT BELOEIL.

The dredge *Richelieu* worked at this place from August 30 to September 5, and between October 7 and 16, 1906. The work was done in front of Brunelle's, and the town wharfs. Four cuts were made: 120, 199, 65 and 50 feet long, 20 feet wide and 8 feet deep at low water. The material removed was 2,975 cubic yards of sand, gravel clay and hard-pan.

DREDGING AT BERTHIERVILLE.

Work was performed at this place by the dredge *Little Giant* between November 18 and 24, 1906, the close of navigation. Work was done in the Bayonne river, at Marceau's mill, making a channel for timber transportation. Also at Cazabon's point three miles above the town, making a channel for ferry and other boats. Work was also done at head of Hay island, four miles above the town. The material removed was 47,440 cubic yards of clay, sand and boulders.

DREDGING AT BLANCHE SHOALS.

The dredge *T.F.M. No. 1* worked at this place from July 1 to November 23, 1906, the close of navigation. The work performed consisted in making a channel for passenger and other boats through a sand shoal, which when completed will have width of 200 feet and a depth of 14 feet below zero. Fifty-five thousand one hundred cubic yards of clay and sand were removed.

Dredging was also performed at this place by the dredge *T.F.M. No. 2* between July 1 and November 23, 1906, the close of navigation. The work done is similar to what is being performed by the dredge *T.M.F. No. 1.* The amount of material taken out was 52,726 cubic yards of clay and sand.

DREDGING AT CHAMBLY BASIN.

Between July 1 and August 29, 1906, the dredge *Richelieu* worked at this place. Seven cuts were made, four 800 feet long, two 250 feet long and one 334 feet long, 20 feet wide and 8 feet deep at low water. All these cuts were made in the channel at the foot of the locks.

The material removed was 16,650 cubic yards of clay, sand and boulders.

DREDGING AT CHATEAUGUAY.

From September 14 to November 17, 1906, the close of navigation, the dredge *Central City* worked at this place. One cut was made, 5,400 feet long, 35 feet wide and 10 feet deep below zero, at the head of Nun's Island, towards Lake St. Louis. The quantity of material removed was 21,510 cubic yards of sand, clay, hard-pan and boulders.

DREDGING AT CHICOUTIMI.

Between July 9 and August 25, and October 15 and November 9, 1906, the close of navigation, the dredge *Progress* worked at this place. The work performed consisted of dredging in the main channel about five miles below Chicoutimi. Several cuts were made through sand shoals to a depth of 17 feet at low water. The material removed was 37,800 cubic yards of clay, sand and boulders.

DREDGING AT COMO.

From August 23 to September 23, 1906, the dredge *Canada* worked at this place. The work consisted of dredging at Hodgin's Mill and at the wharf to accommodate passenger boats and loading of barges. The depth made was 8 feet at low water. Fourteen thousand and ninety cubic yards of clay were removed.

DREDGING AT DOUCET'S LANDING.

Dredge *No. 5 McDonald* worked at this place beween August 1 and 31, 1906. The work consisted in deepening and widening the basin, and in front of the wharf. The depth made was 13 feet at low water. Twenty thousand five hundred and eighty-four cubic yards of clay and sand were removed.

Dredge *No. 6 McDonald* also worked at this place from September 1 to November 24, 1906, the close of navigation. One cut was made in the basin, 1,100 feet long and 350 feet wide. One cut was also made in the front of the wharf, 250 feet long and 60 feet wide. The depth made was 13 feet at low water. The quantity of material removed was 85,660 cubic yards of clay and sand.

DREDGING AT GODFROYE RIVER.

Dredging was done at this place by the dredge *St. Pierre* from September 17 to November 17, 1906, the close of navigation. The work consisted in deepening and widening the channel above the wharf to accommodate ferry boat and barges. The depth made was 8 feet at low water. 38,770 cubic yards of clay, sand and boulders were removed.

DREDGING IN LAKE ST. JOHN.

Dredging at Roberval is done by dredge *Lac St. Jean*, assisted by tug *Marie-Louise*.

During the year 1904-5, the dredge, then called *P. V. Savard*, was rebuilt; a new hull was constructed partly in British Columbia pine and spruce. The anchor posts, chains, wire ropes were renewed . The tug *Marie-Louise* was repaired and a new engine put in; the two dumping scows were repaird. Expenditure, $6,000.

The work done in 1905-6 was, during the summer, at Rivière à la Pipe, and consisted in the sinking of three piers and a turning basin for boats. For the balance of the season, the dredge was employed at the entrance of the Roberval harbour.

During the fiscal year 1906-7, dredging was done in the harbour and in the entrance of the harbour. The quantity of material removal is 21,000 cubic yards.

Amount of expenditure during the fiscal year 1906-7 is $4,000.

DREDGING AT L'ASSOMPTION.

Between August 27 and November 13, 1906, the close of navigation, the dredge *Premier* worked at this place. The work done consisted in dredging through a shoal opposite the Log river, to straighten the channel. The width made was 400 feet and the depth 10 feet at low water. 37,950 cubic yards of clay were removed.

DREDGING AT LOUISEVILLE.

From August 1 to 29, 1906, the dredge *Prince Louis* worked at this place. Work was started one and a half miles above entrance of Lake St. Peter. A cut was made 2,500 feet long, 30 feet wide and 6½ feet below zero. This work was done in the channel to give better accommodation to barges going to this place. 47,505 cubic yards of clay, sand and boulders were removed.

DREDGING AT MASKINONGE.

Between September 3 and October 13, 1906, the dredge *Prince Louis* worked at this place. The nature of the work performed was the deepening of the channel 2½ miles from entrance of Grand Nord channel. The channel was deepened to 6½ feet below zero at different places in a distance of two miles. The width made was 35 feet. All this work was cast over. 85,530 cubic yards of clay and sand were removed.

DREDGING AT NOTRE DAME DE PIERREVILLE.

Dredge *St. Louis* worked at this place from July 16 to August 25, 1906. Two cuts were made to deepen the channel, 1,563 and 1,017 feet long, 25 feet wide and 8 feet deep at low water. The material removed consisted of 7,133 cubic yards of sand.

DREDGING AT NICOLET.

From July 21 to September 5, 1906, the dredge *St. Pierre* worked at this place. Deepening the channel above the wharf to accommodate the ferry boat as well as the lumber barges. The depth made was 10 feet at low water. 29,755 cubic yards of clay and sand were removed.

DREDGING AT OKA.

Dredge *Little Giant* worked at this place from July 1 to August 11, 1906. The work done consisted of dredging at the upper and lower part of the wharf to allow the market and other boats free access. The depth of water made was 10 feet at low water. The material removed was 25,410 cubic yards of clay and gravel.

DREDGING AT PAPINEAUVILLE.

The dredge *Challenge* worked at this place between August 18 and 25, 1906. The work consisted of making three cuts in front and alongside of the wharf 145, 124 and 75 feet long, 25 feet wide and 10 feet deep at low water. The quantity of material removed was 2,850 cubic yards of clay and boulders.

DREDGING AT QUEBEC.

From July 2 to November 21, 1906, the close of navigation, the dredge *International* worked at this place. The nature of the work done consisted of the levelling

of the bottom for the deep water cribs for the extension of the new wharfs at the breakwater. The average depth made was 55 feet at low water. The material removed consisted of 55,250 cubic yards of sand and boulders.

DREDGING AT RIGAUD.

Dredge *Chateauguay* worked at this place from July 1 to October 27, 1906. Dredging was performed between Jones and Hay island, deepening the channel to ten feet at low water, a width of thirty-five feet and a length of one and a quarter miles. This channel is to allow passenger and other vessels a freer passage. 85,470 cubic yards of clay, sand, and quicksand were removed.

Dredging was also done by the dredge *Canada,* from October 8 to 27, 1906. The work performed consisted in making a cut 40 feet wide and 10 feet deep below zero, to allow barges to approach.

DREDGING AT RIMOUSKI.

Dredging was done at this place by the dredge *Progress* between August 27 and October 6, 1906. The nature of the work was the dredging of a channel from the wharf to deep water. The depth made was 15 feet at low water. 18,300 cubic yards of sand, clay and boulders were removed.

Dredge *Nithsdale* also worked at this place from July 30 to November 3, 1906, the close of navigation. The work done consisted of deepening the eastern side of the wharf as well as dredging in the basin. The material removed consisted of 10,700 cubic yards of clay, sand and gravel.

DREDGING AT RIVIÈRE DU LOUP.

Work was done at this place by the dredge *Pontiac* from July 1 to August 14, 1906. The nature of the work was the dredging of a channel one mile above the entrance from Lake St. Peter and also one and one-half miles below Tourville saw-mill. The depth made was 6½ feet below low water. This work was done to allow barges a larger channel to load lumber. 45,035 cubic yards of clay and sand were removed.

The dredge *Prince Louis* also worked at this place between July 26 and 31, 1906. The work done was dredging in the channel one and one-half miles above entrance from Lake St. Peter and two miles below Tourville saw-mill. The width made was 30 feet and 6½ feet at low water. All this work was cast over on account of not having enough water to use scows. The quantity of material removed was 9,520 cubic yards of clay and sand.

DREDGING RIVIÈRE JÉSUS.

Dredge *Otto* worked at this place from July 1 to November 24, 1906, the close of navigation. The work was started at McDonald's wharf and continued towards Mascouche river; also at the entrance of Rivière Jésus. This work was done to give a deeper channel, to allow barges coming in to load hay, grain and stone. The depth made varied from 6½ to 10 feet at low water. 24,105 cubic yards of clay, gravel and boulders were removed.

DREDGING IN THE LIÈVRE RIVER.

Dredge *No. 2* worked at this place from September 3 to November 7, 1906, the close of navigation. Five cuts were made, 174, 810, 1,410, 130 and 526 feet long, 25 feet wide and 10 feet deep at low water. This work consisted in deepening the old channel near the locks, which had filled in through the land slide of the fall of 1902. The material cast over was 14,825 cubic yards of clay, gravel and boulders.

DREDGING IN RIVER LA GRAISSE.

Between July 12 and August 21, 1906, the dredge *Canada* worked at this place, one and one-half miles from the Ottawa river, making a channel 40 feet wide and a depth of 10 feet at low water, to allow barges loading freight. 12,600 cubic yards of rock, sand and clay were removed.

DREDGING AT RIVER OUELLE.

The dredge *Progress* worked at this place from July 2 to 7, 1906, dredging a foundation for the new protection pier. The depth made was 15 feet at low water. 200 yards of sand and clay were removed.

DREDGING IN THE RIVER ST. FRANCIS.

From August 17 to September 8, 1906, the dredge *Little Giant* worked at this place. The work done consisted in deepening one-half mile from mouth of the river, making a channel to accommodate passenger boats. The depth made was 10 feet at low water. 14,430 cubic yards of clay were removed.

The dredge *Duke of York* worked at this place from August 29 to November 22, 1906, the close of navigation. Dredging was performed in different places in a distance of three miles and also at the entrance of this river. The channel was deepened to 10 feet at low water to accommodate passenger boats. Ninety-one thousand feet at low water. 14,430 cubic yards of clay were removed.

Between August 16 and 27, 1906, dredge *Pontiac* worked at this place, dredging at entrance and one-half mile below the river. The work was done for the same purpose of accommodating passenger boats. The material removed was 14,590 cubic yards of sand and quicksand.

DREDGING AT ST. ANDREWS.

Dredging was done at this place by the dredge No. 4, General Construction Company, from July 1 to November 24, 1906, the close of navigation. The dredging done consisted in making a channel 32 feet wide and 10 feet deep at low water to allow boats an approach to the proposed wharf. Thirty thousand three hundred and ninety-three cubic yards of hard-pan, sand, boulders, clay and rock were removed.

DREDGING AT ST. DENIS.

Work was performed at this place by the dredge *Richelieu,* from October 17 to November 19, 1906, the close of navigation. The work consisted of dredging through a shoal from the wharf out to the channel. Four cuts were made, 256, 281, 431 and 456 feet long, 15 feet wide and 8 feet deep at low water. The quantity of material removed was 2,350 cubic yards of clay.

DREDGING AT ST. HILAIRE.

Dredging was done at this place by the dredge *Richelieu,* from September 6 to October 6, 1906. The work done consisted of dredging in front of the town wharf, Prefontaine's wharf, and in the channel and removing a shoal below Grand Trunk Railway bridge. Five cuts were made, 90, 82, 145, 135 and 125 feet long, 15 feet wide and 8 feet deep at low water. The quantity of material removed consisted of 5,700 cubic yards of clay, boulders and hard-pan.

DREDGING AT ST. MAURICE RIVER.

Between July 1 and August 28, 1906, the dredge *Duke of York* worked at this place, continuing the dredging one mile from main channel at Dansereau's mill and also at Union Bag Co.'s wharf. This work consisted in cleaning up the old channel. The depth made was 14 feet at low water. The quantity of material removed was 79,262 cubic yards sand and clay.

DREDGING AT ST. PLACIDE.

The dredge *Central City* worked at this place from July 1 to September 1, 1906. The work performed consisted in dredging from the main channel to the wharf and also alongside the wharf, for a distance of 150 feet, 150 feet wide and 10 feet deep at low water. 39,200 cubic yards of clay and boulders were removed.

DREDGING AT ST. OURS.

Between August 27 and September 1, 1906, the dredge *St. Louis* worked at this place. One cut was made in the channel 291 feet long, 25 feet wide and 8 feet deep at low water. The material removed consisted of 960 cubic yards of sand.

DREDGING AT SOREL.

Work was performed at this place by the dredge *Nithsdale* between November 5 and 14, 1906, the close of navigation. The nature of the work performed consisted of dredging at the Richelieu Landing wharf where the channel was deepened to 16 feet at low water. 1,890 cubic yards of sand were removed.

DREDGING AT THURSO.

Work was performed at this place by the dredge *Challenge* between August 25 and 30, 1906. One cut was made in front of the wharf 115 feet long, 25 feet wide and 10 feet deep at low water. The material removed consisted of 750 cubic yards of clay and boulders.

DREDGING AT VILLE MARIE.

From July 1 to September 8, 1906, the dredge *Queen* was working at this place. The work performed consisted of making five cuts in front and alongside the wharf. One other cut was made in the main channel 2,200 feet long. All these cuts were made to a depth of 9 feet at low water. The material removed was 26,640 cubic yards of clay.

DREDGING AT YAMASKA.

Dredging was done at this place by the dredge *St. Louis* between July 5 and 14, and from September 4 to November 8, 1906, the close of navigation. Two cuts were made, one 963 feet long, near Ile aux Erables, and one 1,612 feet long, near Ile St. Jean. Both these cuts were made in the channel, to a width of 25 feet and a depth of 9 feet at low water. 12,154 cubic yards of sand were removed.

Dredge *Prince Louis* also worked at this place, between October 16 and November 16, 1906, the close of navigation. Dredging was performed in different places, wherever casting over was necessary. Work was started at the entrance of the river and continued for a distance of four miles. The depth made was 6½ feet deep at low water. The quantity of material removed was 32,824 cubic yards of clay and sand.

PROVINCE OF ONTARIO.

DREDGING AT BEAVERTON.

Dredge *Simcoe* worked at this place from July 1 to November 20, 1906, the close of navigation, deepening the turning and channel thereto. The depth made was 17 feet at low water. 13,600 cubic yards of clay, sand, gravel and hard-pan were removed.

DREDGING AT BELLE RIVER.

The dredge *King Edward* worked at this place from September 26 to November 20, 1906, the close of navigation. The dredging consisted in deepening the channel at entrance to harbour to 9 feet at low water. Owing to the exposed position of this work, considerable filling in occurred, and the entire channel required has not yet been completed. 9,480 cubic yards of clay were removed.

DREDGING AT BELLEVILLE.

From July 1 to November 17, 1906, the close of navigation, the dredge *Sir Richard* worked at this place. Four cuts were made, 1,600 feet long, and six cuts, 250 feet long, 25 feet wide and 14 feet deep at low water. The work consisted in deepening the channel along the south wall near the Bay bridge. 71,800 cubic yards of boulders and gravel were removed.

DREDGING AT COLLINGWOOD.

From July 1 to August 25, 1906, the dredge *No. 1 Boone* worked at this place. The work done consisted in widening the turning basin in inner harbour, and also dredging along the face of the new concrete wharf. A depth of 17 feet at low water was made. The quantity of material removed was 26,018 cubic yards of clay, sand and gravel.

The dredge *Kingsford* also worked at this place, from July 1 to November 3, 1906, the close of navigation. This dredge was engaged at the same work as the above dredge, *No. 1 Boone*. The depth made was 22 feet at low water. The quantity of material removed was 17,715 cubic yards of clay, rock, boulders and hardpan.

DREDGING AT FASSET.

From August 30 and September 8 and between September 28 and October 27, 1906, the dredge *Challenge* worked at this place. The work done consisted of seven cuts in front of the wharf, 184, 218, 269, 301, 334, 120 and 114 feet long, 25 feet wide and 10 feet deep at low water. 12,750 cubic yards of clay were removed.

DREDGING AT GODERICH.

From July 25 to November 15, 1906, the close of navigation, the dredge *Arnoldi* worked at this place. The work consisted in cleaning and enlarging a basin in inner harbour to a depth of 19 feet at low water. Also dredging in channel between piers at outer entrance to same.. The improvements to basin in inner harbour have already proved a great service to the large grain boats unloading in this harbour. 36,162 cubic yards of clay, sand, mud, rock and gravel were removed.

DREDGING AT HAMILTON.

Dredging was done at this place by the dredge *Nipissing,* from July 1 to August 21, 1906. Seven cuts were made, 500, 275, 250, 225 and three 300 feet long, 30 feet wide and 18 feet deep at low water. This work was done in front of the International Harvester Company's wharf, widening the channel and making a turning basin. The material removed was 27,600 cubic yards of quicksand. Owing to the sinking of this dredge at this place during a storm on August 22, it was found impossible to continue operations. Dredge was raised and towed to Ottawa to be repaired.

DREDGING AT KINGSVILLE.

Between November 1 and 24, 1906, the close of navigation, the dredge *Ontario* worked at this place. Two cuts were made inside the harbour, 250 feet long each, 25 feet wide and 14 feet deep at low water. These cuts were made along the west side of east pier to increase the length of dock. The amount of material removed was 9,465 cubic yards of sand and boulders.

DREDGING IN THE KAMINISTIQUIA RIVER.

The work done at this place consisted in the dredging of a channel, 4,400 feet long and 140 feet wide, from the Imperial Company's wharfs up the river, removing a shoal from Elevator E to 500 feet west of the McKellar wharf, with an average width of 200 feet, dredging in the centre of river from Ogilvie's elevator to turning basin into Mission, 2,400 feet long by an average width of 120 feet; removing shoal spots and dredging in Kaministiquia river in front of wharfs, from centre of old pile wharf, east of Consolidated elevator, to west end of Grand Trunk Pacific Railway's wharf, 3,600 feet in length by an average width of 90 feet. The depth made at these places was 22 feet at low water. The different dredges employed were:—

No. 6 Great Lakes Dredging Company, from July 1 to November 5, 1906, removed 362,979 cubic yards of clay and sand.

No. 5 Great Lakes Dredging Company, from July 1 to December 7, 1906, removed 391,653 cubic yards clay, gravel and boulders.

Dominion, from July 1 to December 8, 1906, removed 598,762 cubic yards clay, gravel and boulders.

No. 8 Great Lakes Dredging Company, from July 16 to December 5, 1906, removed 125,265 cubic yards of clay, gravel and boulders.

DREDGING AT LITTLE CURRENT.

Work was started at this place by the dredge *No. 14 Boone* on July 1, and continued there up to November 17, 1906, the close of navigation. The work consisted in blasting and dredging the main steamer channel to a depth of 22 feet at low water. 71,180 cubic yards of rock were removed.

DREDGING AT MATCHEDASH BAY.

From July 1 to November 17, 1906, the dredge *No. 4* Owen Sound Dredge and Construction Co., worked at this place. The work consisted in making a channel 100 feet wide and 14 feet deep at low water, between Waubaushene and Fesserton. 88,290 cubic yards of clay were removed.

DREDGING AT MEAFORD.

Dredge *Togo* worked at this place between August 23 and November 24, 1906, the close of navigation. Work consisted in dredging in the harbour and along the face of west wharf. The depth made was 20 feet at low water. 38,078 cubic yards of mud, clay and gravel were removed.

DREDGING AT MIDLAND.

The work done at this place consisted in the enlarging of the channel, leading to the Grand Trunk elevator and coal dock, also making a channel along face of Elevator wharf. The depth made was 26 feet at low water. Three dredges worked at this place, viz.:—*No. 9,* Owen Sound Dredge and Construction Co., from July 1 to November 30, 1906, removing 59,540 cubic yards of clay, sand, rock and boulders.

The *Excelsior* between November 15 and December 1, 1906, removing 19,000 cubic yards of clay and sand.

The *Monarch* from August 10 to December 1, 1906, removing 71,285 cubic yards of clay, sand, gravel and rocks.

DREDGING AT MITCHELLS BAY.

The dredge *Ontario* worked at this place between July 1 and 13, 1906. Work consisted in the dredging of a channel about 1,400 feet long leading to the wharf with an average width of 40 feet and a depth of 6 feet at low water. The quantity of material removed consisted of 7,036 cubic yards of clay and sand.

DREDGING AT NEW LISKEARD.

Dredge *Queen* worked at this place from September 10 to November 3, 1906, the close of navigation. Three cuts were made 200 feet long each, in the turning basin, which had filled up. Water being so low, one cut had to be made 450 feet long next to the wharf so as to allow boats to turn. Two cuts 500 feet long each were also made in the main channel at the bend, as it had filled up with refuse coming down the Wabe river. 13,716 cubic yards of clay were removed.

DREDGING AT NORTHPORT.

Dredging was done at this place by the dredge *Trenton,* from July 1 to August 21, 1906. The work performed consisted in deepening the approaches to and around wharf to enable vessels to land with more freedom. 23,120 cubic yards of gravel, clay and boulders were removed.

DREDGING AT OTTAWA.

The dredge *Nipissing* started work at this place on October 22, and continued there up to November 24, 1906, the close of navigation. The work consisted in making two cuts 125 feet long and one 50 feet long, 30 feet wide and 18 feet deep at low water. This work was done in front of the government property at the foot of Mill island. 2,800 cubic yards of slabs and sawdust were removed.

DREDGING AT OWEN SOUND.

From July 1 to August 4, and between October 19 and November 24, 1906, the close of navigation, the dredge *Frank* worked at this place deepening to 23 feet at low water. 71,820 cubic yards of clay and sand were removed.

DREDGING AT PENETANGUISHENE.

Between August 7 and September 29, 1906, the dredge *Frank* worked at this place. The work consisted of enlarging the channel to the town wharfs and making a depth of 20 feet at low water. 94,500 cubic yards of clay and sand were removed.

DREDGING AT POINT EDWARD.

The dredge *No. 3* Dominion Dredging Company worked at this place from July 1 to October 6, 1906. Work performed consisted in the completing of a dredged channel 250 feet wide along water front of dock to a depth of 22 feet at low water. 54,150 cubic yards of gravel were removed.

DREDGING AT PORT ARTHUR.

The dredge *I.X.L.* worked at this place from July 1 to November 24, 1906, the close of navigation. The work consisted in deepening the channel at the entrance to the harbour, continuing the channel to King's elevator, inside of breakwater, and in places in front of King's wharf, and also in continuing the channel to Canadian Northern coal and iron dock. The depth made was 22 feet at low water. The quantity of material removed was 270,147 cubic yards of clay and sand.

DREDGING AT PORT BRUCE.

The dredge *Ottawa* worked at this place from July 28 to August 9, 1906. The work performed consisted in removing a bar which had formed across entrance to piers, and thereby completely blocking ingress or egress. Eighteen thousand four hundred and eighty-four cubic yards of sand and gravel were removed.

DREDGING AT PORT BURWELL.

Dredge *Ontario* worked at this place from July 1 to September 29, 1906. Five cuts were made 850 feet long each, 25 feet wide and 17 feet deep at low water, through the bar outside of piers. The material removed was 19,325 cubic yards of sand.

Dredge *No. 2* Dominion Dredging and Construction also worked at this place from July 1 to September 14, 1906. A stone was taken out which had been washed off the end of the pier. A small shoal was removed from the upper end of the harbour and a large area was dredged to form a turning basin as well as the main entrance channel. A depth of 23 feet at low water was made. 20,267 cubic yards of clay and sand were removed.

Dredge *St. Lawrence* also worked at this place from July 1 to November 12, 1906, the close of navigation, being engaged on same work as above dredge *No. 2*. The quantity of material taken out was 72,151 cubic yards of clay, sand and gravel.

DREDGING AT PORT ELGIN.

Between July 1 and 16, 1906, the dredge *Arnoldi* worked at this place dredging to afford safe entrance at Commercial dock. A depth of 20 feet at low water was made. The quantity of material removed was 10,540 cubic yards of clay, sand and mud.

DREDGING AT PORT STANLEY.

Dredging was done at this place beween July 1 and 25, and from August 11 to October 20, 1906. The work done consisted in excavating a channel 950 feet long and

100 feet wide at outer entrance to piers to a depth of 20 feet at low water; dredging in inner harbour to a depth of 18 feet below low water. Also a few days' dredging in the Lake Erie Coal Company's slip and at outer entrance to same to provide sufficient water for the safe entrance for the coal boat plying in and out of this slip. 35,086 cubic yards of clay and sand were removed.

DREDGING AT ROCKLAND.

Between September 10 and 27, 1906, the dredge *Challenge* worked at this place. Three cuts were made in front of Edward's log slide, 225, 227 and 226 feet long, 25 feet wide and 10 feet deep at low water. One other cut was also made in front of the coal dock, 75 feet long, 25 feet wide and 10 feet deep at low water. The quantity of material removed at this place was 9,700 yards of clay.

DREDGING AT RONDEAU.

From July 1 to September 4, 1906, the dredge *Meade* worked at this place dredging in inner harbour and at westerly side along coal dock. Also the opening up of a channel at entrance to harbour to a depth of 20 feet at low water. Dredging between piers to 18 feet and also removing some obstructions in the Lake Erie Company's coal slip. 40,393 cubic yards of clay and sand were removed.

DREDGING AT SARNIA.

From July 1 to August 11, 1906, the dredge *E. Hall, No. 1* worked at this place. Dredging was done opposite the Imperial Oil Company's dock and also in front and between the Sarnia Bay Lumber Company, and the Cleveland Sarnia Saw Mill Companys docks to a depth of 15 feet at low water in order to permit the entrance of the large rafts from the river. 16,900 cubic yards of clay and sand were removed.

DREDGING IN THE SOUTH NATION RIVER.

The dredge *Challenge* worked at this place from July 1 to August 18, 1906. Two cuts were made at the entrance 710 and 976 feet long. One other cut was made through a shoal, near the ferry, 130 feet long. All these cuts were made to a width of 25 feet and a depth of 10 feet at low water. An old pier was also removed from the channel 26 feet long by 26 feet wide and 10 feet deep. Some work was also done in front of Anderson's mill which consisted of scraping the material which had fallen on the rock for a distance of 190 feet, making a depth of 8 feet at low water. The material removed at this place was 15,150 cubic yards of clay.

DREDGING AT STURGEON FALLS.

Between July 1 and November 12, 1906, the close of navigation the dredge *Mattawa* worked at this place. Two cuts were made 1,500 and 800 feet long, 25 feet wide and 12 feet deep at low water. These cuts were made through a sand shoal to straighten and shorten the old channel. 53,600 cubic yards of clay and sand were removed.

DREDGING IN THE THAMES RIVER.

Dredge *Meade* worked at this place from September 10 to October 22, 1906. Dredging was done in front of the dock to a depth of 13 feet at low water. 59,018 cubic yards of clay and sand were removed.

DREDGING AT TORONTO.

Work was performed at this place by the dredge *Haney* between July 1 and December 3, 1906, the close of navigation. The work consisted in deepening the eastern channel and the approaches thereto to a depth of 19 feet at low water. 31,794 cubic yards of sand were removed.

DREDGING AT TRENTON.

Dredge *Trenton* worked at this place between August 27 and October 27, 1906, deepening the approaches to the wharf to a depth of 14 feet at low water. 66,060 cubic yards of gravel, clay and boulders were removed.

DREDGING AT WAUPOOS.

Dredge *Trenton* worked at this place between August 22 and 25, 1906, deepening the channel leading to the wharfs. The depth of water made was 12 feet at low water. 3,510 cubic yards of gravel, clay and boulders were removed.

LIST OF DREDGES EMPLOYED DURING 1906-7.

Departmental Dredges:—

Challenge.
Ontario.
Nipissing.
Sir Richard.
Richelieu.
Queen.
International.
Progress.
Mattawa.
St. Louis.
No. 2.

Dredges Rented:—

Nithsdale.
No. 5, McDonald.
No. 6, Prendergast.
Little Giant.
Duke of York.
Pontiac.
Quebec.
No. 1, Moore.
No. 2, Moore.
No. 4, General Construction Co.
Chateauguay.
Canada.
Duke of York (Poupore).
Central City.
Pontiac.
Prince Louis.
Otto.
Premier.
Arnoldi.
No. 1, Boone.
Kingsford.
No. 14, Boone.
Frank.
No. 6, Great Lakes Dredging Co.
No. 2, Dominion Dredging and Construction Co.
St. Lawrence.
Owen Sound Dredge Construction Co.
Ottawa.
Meade.
Trenton.
No. 5, Great Lakes Dredging Co.
Dominion.
No. 8, Great Lakes Dredging Co.
No. 9, Owen Sound Dredge and Construction Co.
Excelsior.
Monarch.
King Edward.
No. 3, Dominion Dredging Co.
Simcoe.
I. X. L.
Haney.
Togo.
E. Hall, No. 1.
Ontario.
St. Pierre.

SESSIONAL PAPER No. 19

STATEMENT of Expenditure and quantities of material removed by the different Departmental Dredges at various localities in Ontario and Quebec, during the fiscal year ending March 31, 1907.

Dredge.	Location.	Yards removed.	Character of soil.	Expenditure.	Cost per yard.
				$ cts.	$ cts.
Challenge	South Nation	15,150	Sand and clay	3,933 92	0 09 3/50
	Papineauville	2,850	Clay and boulders		
	Thurso	750	" "		
	Fassett	12,750	Clay		
	Rockland	9,700	"		
Ontario	Port Burwell	19,325	Sand	6,289 74	0 21 7/25
	Kingsville	9,465	Sand, clay and boulders		
Nipissing	Hamilton	27,600	Quicksand	3,785 53	0 12 9/25
	Ottawa River	2,800	Slabs and sawdust		
Sir Richard	Belleville	71,800	Boulders and gravel	5,294 75	0 07 9/25
Richelieu	Chambly Basin	16,650	Clay, sand and boulders	3,612 91	0 13 4/50
	Beloeil	2,975	Clay, sand, hardpan and gravel		
	St. Hilaire	5,700	Clay, sand, hardpan		
	St. Denis	2,350	Clay		
Queen	Ville Marie	26,640	Clay	5,701 80	0 14 3/25
	New Liskeard	13,716	"		
International	Quebec	55,250	Sand and boulders	12,046 67	0 21 1/5
Progress	River Ouelle	200	Sand and clay	14,321 15	0 25 7/50
	Chicoutimi	37,800	Clay, sand and boulders		
	Rimouski	18,300	" " "		
Mattawa	Sturgeon Falls	53,600	Clay and sand	8,128 04	0 15 3/25
Nithsdale	Rimouski	10,700	Clay, sand and gravel	9,968 16	0 79 4/25
	Sorel	1,890	Sand		
St. Louis	Yamaska	12,154	Sand	3,196 57	0 15 39/50
	Notre Dame de Pierreville	7,133	"		
	St. Ours	960	"		
No. 2	Lièvre River	14,825	Clay, gravel and boulders	3,029 56	0 20 7/50

STATEMENT of Expenditure and quantities of material removed by the different Contractors' Dredges at various localities in Ontario and Quebec.—*Continued.*

Dredge.	Location.	Yards removed.	Character of soil.	Expenditure.	Cost per yard.
				$ cts.	$ cts.
No. 5..... R. McDonald.	Doucet's Landing.....	20,584	Clay and sand..	5,647 68	0 27 11/25
No. 6.. ..... Prendergast.	River Batiscan.....	56,200	Clay and sand	7,160 97	0 12 3/4
No. 6..... McDonald.	Doucet's Landing.....	85,660	Clay and sand	23,367 42	0 27 7/25
Little Giant .... Cohen & Son.	Oka.....	25,410	Clay and gravel.	8,493 30	0 33 3/5
	St. Francis River.....	14,430	Clay	1,869 83	0 12 19/20
	Berthierville	47,440	Clay and sand	10,534 46	0 22 1/5
Duke of York.. Can. Improv. Co.	River St. Francis.....	91,425	Clay and sand....	10,988 10	0 12
Pontiac..... ... Can. Improv. Co.	River St. Francis..... .	14,590	Sand and quicksand.....	2,416 60	0 16 9/25
Quebec .... Genl. Const. Co.	Beauharnois...	72,640	Clay and rock	22,695 95	0 31 6/25
No. 1..... T. F. Moore Co.	Blanche Shoals	55,100	Clay and sand	11,994 00	0 21 19/25
No. 2..... ... T. F. Moore Co	Blanche Shoals	52,726	Clay and sand	11,418 71	0 21 13/20
No. 4..... ... Genl. Const. Co.	North River, St. Andrews	30,393	Hardpan, sand, boulders, clay and rock	18,291 05	0 60 1/5
Chateauguay ... L. Cohen & Son.	Rigaud, Ile au Foin.....	85,470	Clay, sand and quicksand.	23,756 75	0 27 19/20
Canada ..... Cohen & Son.	Rigaud	12,590	Clay	4,226 70	0 33 1/2
	River LaGraisse	12,600	Rock, clay and stone.	4,284 00	0 34
	Como.....	14,090	Clay	8,139 30	0 57 19/25
Duke of York. . W.J. Poupore Co	River St. Maurice.... .	79,262	Sand and clay	9,442 32	0 11 9/10

SESSIONAL PAPER No. 19

STATEMENT of Expenditure and quantities of material removed by the different Contractors' Dredges at various localities in Ontario and Quebec—*Continued.*

Dredge.	Location.	Yards removed.	Character of soil.	Expenditure.	Cost per yard.
				$ cts.	$ cts.
Central City....	St. Placide	39,200	Clay, boulders and stone.....	13,072 90	0 33 17/50
Cohen & Son.	Chateauguay.....	21,510	Sand, clay, boulders and hard-pan	6,084 45	0 27 7/25
Pontiac. .. .... W.J. Poupore Co	River du Loup en haut..	45,035	Clay and sand.....	5,085 45	0 11 7/25
Prince Louis....	River du Loup en haut..	9,520	Clay and sand	761 60	0 08
W.J. Poupore Co	Maskinonge	85,530	" "	7,461 66	0 68 18/25
	Yamaska	32,824	" "	3,695 89	0 11 1/4
	Louiseville..	47,505	" "	3,878 87	0 08 4/25
St. Pierre	Nicolet	29,755	Clay and sand	3,960 15	0 13 3/10
A. St. Pierre.	Godfroye	38,770	Clay, sand and boulders.....	3,990 50	0 10 3/10
Otto.... ..... Genl. Const. Co.	River Jesus	24,105	Clay, gravel and boulders.	8,030 75	0 33 3/10
Premier ..... Genl. Const. Co.	L'Assomption...	37,950	Clay	6,670 50	0 27 3/8

STATEMENT of Expenditure and quantities of material removed by the different Contractors' Dredges at various localities in Ontario during the fiscal year ending March 31, 1907.

Dredge.	Location.	Yards removed.	Character of Soil.	Expenditure.	Cost per yard.
				$ cts.	$ cts.
Arnoldi	Goderich	36,162	Sand, mud, rock and gravel	13,276 20	0 36 7/10
Marlton Dg. Co.	Port Elgin	10,540	Clay and sand	3,199 50	0 30 7/20
No. 1. C. S. Boone.	Collingwood	26,018	Clay, sand and gravel	9,008 12	0 34 3/5
Kingsford Gt. Lakes Dg. Co	Collingwood	26,018	Clay, rock, bldrs. and hardpan.	40,955 11	2 31 9/20
No. 14 C. S. Boone.	Little Current	71,180	All rock	121,378 38	1 70 1/2 3/5
Frank	Owen Sound	71,820	Clay and sand	8,469 59	0 11 29/40
A. F. Bowman	Penetanguishene	94,500	"	11,563 55	0 12 1/10
No. 6 Gt. Lakes Dg. Co.	Kaministiquia & Mission Rivers	362,979	Clay and sand	42,122 84	0 11 3/5
No. 2 Dominion Dg. & Const. Co.	Port Burwell	20,267	Clay and sand	5,306 75	0 26 9/20
St. Lawrence Manley Co.	Port Burwell	72,151	Clay, sand and gravel and pulling out piles and crib work	22,549 94	0 31 1/4
No. 4. Owen Sound Dg. & Const. Co.	Matchedash	88,290	Clay	10,737 32	0 12 4/5
Ottawa Manley Co.	Port Stanley	35,086	Clay and sand	6,540 84	0 18 16/25
	Port Bruce	18,484	Sand and gravel	2,161 00	0 11 7/25
Meade C. S. Boone.	Rondeau	40,393	Clay and sand	5,523 81	0 13 33/50
	Thames River	59,018	"	8,905 66	0 15 1/10
Trenton Weddell.	North Port	23,120	Clay, gravel and bldrs	9,730 80	0 42 1/10
	Waupoos	3,510	"	1,029 90	0 29 17/20
	Trenton	66,060	Clay, sand and gravel	10,076 00	0 15 1/4
No. 5. Gt. Lakes Dg. Co	Kaministiquia & Mission Rivers	391,653	Clay, gravel and boulders	37,702 60	0 09 3/5

STATEMENT of Expenditure and quantities of material removed by the different Contractors' Dredges at various localities in Ontario—*Continued.*

Dredge.	Location.	Yards removed.	Character of Soil.	Expenditure.	Cost per yard.
				$ cts.	$ cts.
Dominion..... Gt. Lakes Dg.Co	Kaministiquia & Mission Rivers....	598,762	Clay, gravel and boulders . .	56,991 19	0 09½
No. 8..... . .. Gt. Lakes Dg.Co	Kaministiquia & Mission Rivers.....	125,265	Clay, gravel and boulders	13,324 79	0 10⅜
No. 9..... .... Owen Sound Dg. & Const. Co.	Midland.	59,540	Clay, sand, rock and boulders..	20,663 29	0 34⅞
Excelsior. ..... Owen Sound Dg. & Const. Co.	Midland.....	19,000	Clay and sand	6,460 00	0 34
Monarch ..... Owen Sound Dg. & Const. Co.	Midland.....	71,285	Clay, sand, gravel and rock....	38,612 50	0 54⅘
King Edward.. Windsor Dg. Co.	Belle River.....	9,480	Clay.....	2,556 50	0 26¾⅕
No. 3 ..... Domn. Dg.Co.	Point Edward..... .	54,150	Gravel.....	9,962 62	0 18⅖
Simcoe.... ..... Brown & Alymer	Beaverton....	13,066	Clay, sand, gravel and hardpan.	4,166 50	0 31²²⁄₂₅
I.X.L. ... .. R. Weddell.	Port Arthur.....	270,147	Clay and sand.....	26,187 98	0 09⅞⅕
Haney.... ..... Haney & Miller.	Toronto Harbour.....	31,794	Sand.....	5,466 25	0 17⅙
E. Hall No. 1... Sarnia Bay, Lumber, Timber & Salt Co.	Sarnia.....	16,900	Clay and sand	2,979 04	0 17⅓
Togo..... Weddell, Manley & Weddell.	Meaford.....	38,078	Mud, clay and gravel.....	13,617 87	0 35½
Ontario. ..... Chatham Dg.Co.	Mitchells Bay	7,036	Clay and sand.....	1,100 40	0 15³⁄₁₀

Classification of Disbursements of the Dredges during the Nine Months ended 31st March, 1907.

DREDGE 'CHALLENGE.'

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	428 76	436 12	590 20	504 78	202 50				83 05	2,245 41
Coal		461 83	482 68							944 51
Provisions	134 14	139 82	1 50	157 89	30 80				19 94	484 09
Stores		4 80		1 48		7 00			16 50	29 78
Equipment		6 14								6 14
Repairs		1 60							278 84	280 44
Contingencies				3 55						3 55
Totals	562 90	1,050 31	1,074 38	667 70	233 30	7 00			398 33	3,993 92
Working expenses	562 90	1,048 71	1,074 38	667 70	233 30	7 00			119 49	3,713 48
Repairs		1 60							278 84	280 44
Totals	562 90	1,050 31	1,074 38	667 70	233 30	7 00			398 33	3,993 92

DREDGE 'ONTARIO.'

Wages	475 00	456 77	450 00	372 74	637 17	30 00	30 00	70 00	332 78	2,854 46
Coal	133 34	147 27	144 29	102 30	191 60				43 85	762 65
Provisions	135 00	125 71	123 00	132 10	20 18				84 00	619 99
Stores	2 21	53 92		13 89	8 15				105 75	183 92
Equipment	4 00		47 25							51 25
Repairs	28 20	105 65	8 38	40 29	45 86				1,323 32	1,551 70
Contingencies	23 00	40 14	20 55		49 10			62 25	70 73	265 77
Totals	800 75	929 46	793 47	661 32	952 06	30 00	30 00	132 25	1,960 43	6,289 74
Working expenses	772 55	823 81	785 09	621 03	906 20	30 00	30 00	132 25	637 11	4,738 04
Repairs, ordinary	28 20	105 65	8 38	40 29	45 86					1,551 70
" extraordinary									1,323 32	
Totals	800 75	929 46	793 47	661 32	952 06	30 00	30 00	132 25	1,960 43	6,289 74

DREDGE 'NIPISSING.'

Wages	430 00	420 33	336 16	440 31	459 00					2,085 80
Coal	234 50	266 00	6 50	101 50						608 50
Provisions	127 30	120 68	98 90	141 29	87 40					575 57
Stores		5 00	9 12	1 83				9 60	17 75	43 30
Equipment	19 00									19 00
Repairs	7 10				19 80	23 04			288 50	338 44
Pilotage			60 00							60 00
Contingencies	2 27	2 80		1 20	31 00	17 65				54 92
Totals	820 17	814 81	510 68	686 13	597 20	40 69		9 60	306 25	3,785 53
Working expenses	813 07	814 81	510 68	686 13	577 40	17 65		9 60	17 75	3,447 09
Repairs, ordinary	7 10				19 80	23 04			288 50	338 44
Totals	820 17	814 81	510 68	686 13	597 20	40 69		9 60	306 25	3,785 53

DREDGE 'SIR RICHARD.'

Wages	550 00	425 00	425 00	425 00	337 32	135 00	135 00	173 00		2,605 32
Coal	252 56	116 50	244 85	229 19	179 37					1,022 47
Provisions	123 00	206 93	123 00	123 00	87 00					662 93
Stores	7 55	18 05	62 33	13 83	7 96		10 00		75 50	195 22
Equipment					24 28	25 00				49 28
Repairs	228 75	150 54	24 25	6 00	33 40	1 00		161 63	92 70	698 27
Contingencies	41				46 93	11 10		2 82		61 26
Totals	1,162 27	917 02	879 43	797 02	716 26	172 10	145 00	337 45	168 20	5,294 75
Working expenses	933 52	766 48	855 18	791 02	682 86	171 10	145 00	175 82	75 50	4,596 48
Repairs, ordinary	228 75	150 54	24 25	6 00	33 40	1 00		161 63	92 70	698 27
Totals	1,162 27	917 02	879 43	797 02	716 26	172 10	145 00	337 45	168 20	5,294 75

CLASSIFICATION of Disbursements of the Dredges during the Nine Months ended March 31, 1907—*Continued.*

DREDGE 'RICHELIEU,' D.P.W.

ITEMS.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	110 00	420 00	420 00	420 00	350 33	80 00	80 00	80 00	80 00	2,340 33
Coal		231 59	92 02	194 55	3 72					521 88
Provisions	123 00	123 00	123 00	127 75	113 70					610 45
Stores		17 10		7 81					75 50	100 41
Repairs		1 25	13 48	5 91				6 75		27 39
Contingencies					12 15					12 45
Totals	533 00	792 94	648 50	756 02	480 20	80 00	80 00	86 75	155 50	3,612 91
Working expenses	533 00	791 69	635 02	750 11	480 20	80 00	80 00	80 00	155 50	3,585 52
Repairs, ordinary		1 25	13 48	5 91				6 75		27 39
Totals	533 00	792 94	648 50	756 02	480 20	80 00	80 00	86 75	155 50	3,612 91

DREDGE 'QUEEN,' D.P.W.

Wages	533 85	450 00	470 00	451 13	453 00	178 65	132 75	115 00	131 33	2,915 71
Coal	96 30		132 25		160 00	118 26	16 00	24 00	582 50	1,129 25
Provisions	193 24	138 48	135 00	133 45	148 96	25 16	12 00	12 00	17 03	815 32
Stores		28 05	1 75		42 29	27 81	13 70		80 35	193 95
Equipment		112 50			46 85					159 35
Repairs			18 00	80 55	96 16	62 54	43 90		31 36	332 51
Towage	84 00									84 00
Contingencies	5 55				30 36	2 65			33 15	71 75
Totals	912 94	729 03	757 00	665 13	977 62	415 01	218 35	151 00	875 72	5,701 80
Working expenses	912 94	729 03	739 00	584 58	881 46	352 47	174 45		844 36	5,369 29
Repairs, ordinary			18 00	80 55	96 16	62 54	43 90		31 36	332 51
Totals	912 94	729 03	757 00	665 13	977 62	415 01	218 35	151 00	875 72	5,701 80

DREDGE 'INTERNATIONAL.'

Wages	616 61	587 90	592 00	590 00	554 17	365 33		257 13	432 26	2,995 40
Coal	1,114 55									1,114 55
Provisions	172 00	185 16	186 80	184 00	172 00	97 87		49 50	138 40	1,185 73
Stores		30 00		49 88						79 88
Equipment		32 61								32 61
Repairs	84 75	50 65	29 59	255 96	660 13	16 24			322 43	1,419 75
Towage			44 00					52 00	248 25	344 25
Contingencies							8 00		3,866 50	3,874 50
Totals	1,987 91	886 32	852 39	1,079 84	1,386 30	479 44	8 00	358 63	5,007 84	12,046 67
Working expenses	1,903 16	835 67	822 80	823 88	726 17	463 20	8 00	358 63	4,685 41	10,626 92
Repairs, ordinary	84 75	50 65	29 59	255 96	660 13	16 24			322 43	1,419 75
Totals	1,987 91	886 32	852 39	1,079 84	1,386 30	479 74	8 00	358 63	5,007 84	12,046 67

DREDGE 'PROGRESS.'

Wages	925 18	1,022 42	1,558 64	1,259 66	779 01	295 81	48 39	96 06	297 58	6,282 75
Coal	2,741 55	367 93	499 38	10 90						3,618 76
Provisions	342 39	383 49	340 92	345 86	222 79	24 77		22 50	103 00	1,785 72
Stores	4 33		270 83	17 69						292 85
Equipment		11 00	66 45							77 45
Repairs	183 69	64 99	468 44	758 73	507 46				96 76	2,080 07
Towage						64 00			16 00	80 00
Contingencies				14 40	30 00			17 00	42 15	103 55
Totals	4,196 14	1,849 83	3,204 66	2,407 24	1,539 26	384 58	48 39	135 56	555 49	14,321 15
Working expenses	4,012 45	1,784 84	2,736 22	1,648 51	1,031 80	384 58	48 39	135 56	458 73	12,241 08
Repairs, ordinary	183 69	64 99	468 44	758 73	507 46				96 76	2,080 07
Totals	4,196 14	1,849 83	3,204 66	2,407 24	1,539 26	384 58	48 39	135 56	555 49	14,321 15

CLASSIFICATION of Disbursements of the Dredges during the Nine Months ended March 31, 1907—*Continued.*

DREDGE 'MATTAWA,' D. P. W.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	408 72	437 10	432 00	440 00	311 65	38 75	38 75	73 75	275 44	2,456 16
Coal	545 75	247 88	1,134 18		47 00					1,974 81
Provisions	126 48	135 00	135 00	135 00	127 95	24 00	12 00	34 95	15 00	747 18
Stores		5 40	4 05	6 80					221 71	237 96
Equipment			100 05						302 47	402 52
Repairs	202 85	368 30		108 64	25 73				24 02	729 54
Contingencies	10 18	12 71		1,444 85	38 14				73 99	1,579 87
Totals	1,293 98	1,206 39	1,805 28	2,135 29	552 27	62 75	50 75	108 70	912 63	8,128 04
Working expenses	1,091 13	838 09	1,805 28	2,026 65	526 54	62 75	50 75	108 70	888 61	7,398 80
Repairs, ordinary	202 85	368 30		108 64	25 73				24 02	729 54
Totals	1,293 98	1,206 39	1,805 28	2,135 29	552 27	62 75	50 75	108 70	912 63	8,128 04

DREDGE 'ST. LOUIS,' D. P. W.

Wages	385 00	395 00	395 00	400 00	226 66	75 00				1,876 66
Provisions	123 30	123 00	123 00	123 00	76 40					568 70
Stores						12 50				12 50
Repairs	428 88	126 87	4 81		25 55					586 11
Towage		90 00								90 00
Contingencies	1 00			2 10	59 50					62 60
Totals	938 18	734 87	522 81	525 10	388 11	87 50				3,196 57
Working expenses	509 30	608 00	518 00	525 10	362 56	87 50				2,610 46
Repairs, ordinary	428 88	126 87	4 81		25 55					586 11
Totals	938 18	734 87	522 81	525 10	388 11	87 50				3,196 57

DREDGE 'No. 2,' D. P. W.

Wages	152 30	297 73	253 74	210 00	174 00	75 00			277 32	1,440 09
Coal		443 62	24 00	194 50					523 12	1,185 24
Provisions	53 93		77 40	67 15	46 00				9 26	253 74
Stores									17 25	17 25
Repairs						7 15			24 09	31 24
Towage					102 00					102 00
Totals	206 23	741 35	355 14	471 65	322 00	82 15			851 04	3,029 56
Working expenses	206 23	741 35	355 14	471 65	322 00	75 00			826 95	2,998 32
Repairs, ordinary						7 15			24 09	31 24
Totals	206 23	741 35	355 14	471 65	22 00	82 15			851 04	3,029 56

DREDGE 'NITHSDALE,' D. P. W.

Wages	465 50	447 75	576 67	418 69	254 98					2,163 59
Coal	299 63		148 32							447 95
Provisions	138 16	128 91	144 80	123 49	74 80					610 10
Stores		149 65	21 12	20 70	2 82					194 29
Repairs	231 72	191 45	5 95	86 78						515 90
Towage				6 00						6 00
Contingencies	1,262 90	1,344 25	1,200 00	1,540 75	682 43					6,030 33
Totals	2,397 85	2,262 01	2,096 86	2,196 41	1,015 03					9,968 16
Working expenses	2,166 13	2,070 56	2,090 91	2,109 63	1,015 03					9,452 26
Repairs, ordinary	231 72	191 45	5 95	86 78						515 90
Totals	2,397 85	2,262 01	2,096 86	2,196 41	1,015 03					9,968 16

DREDGE No. 5, R. MACDONALD.

Wages		90 00								90 00
Contingencies		5,557 68								5,557 68
Totals		5,647 68								5,647 68
Working expenses		5,647 68								5,647 68
Totals		5,647 68								5,647 68

CLASSIFICATION OF DISBURSEMENTS of the Dredges during the Nine Months ended 31st March, 1907—*Continued.*

DREDGE No. 6, PRENDERGAST.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	67 31	68 66								135 97
Contingencies	5,600 00	1,425 00								7,025 00
Totals	5,667 31	1,493 66								7,160 97
Working expenses	5,667 31	1,493 66								7,160 97
Totals	5,667 31	1,493 66								7,160 97

DREDGE No. 6, MACDONALD.

Wages			78 00	78 00	63 00					219 00
Stores				5 22						5 22
Contingencies			7403 40	8,515 80	7,209 00					23,128 20
Totals			7,481 40	8,599 02	7,272 00					23,352 42
Working expenses			7,481 40	8,599 02	7,272 00					23,352 42
Totals			7,481 40	8,599 02	7,272 00					23,352 42

DREDGE 'LITTLE GIANT,' L. COHEN & SON.

Wages	78 00	30 00	34 00	81 00	84 25					307 25
Contingencies	6,213 90	3,341 85	2,458 96	4,867 25	3,708 38					20,590 34
Totals	6,291 90	3,371 85	2,492 96	4,948 25	3,792 63					20,897 59
Working expenses	6,291 90	3,371 85	2,492 96	4,948 25	3,792 63					20,897 59
Totals	6,291 90	3,271 85	2,492 92	4,948 25	3,792 63					20,897 59

DREDGE 'DUKE OF YORK,' CANADA IMPROVEMENT CO.

Wages			62 50	67 50	79 25					209 25
Contingencies			4,079 36	4,461 86	2,237 63					10,778 85
Totals			4,141 86	4,529 36	2,316 88					10,988 10
Working expenses			4,141 86	4,529 36	2,316 88					10,988 10
Totals			4,141 86	4,529 36	2,316 88					10,988 10

DREDGE 'PONTIAC,' CANADA IMPROVEMENT CO.

Wages		40 00								40 00
Contingencies		2,376 60								2,376 60
Totals		2,416 60								2,416 60
Working expenses		2,416 60								2,416 60
Totals		2,416 60								2,416 60

DREDGE 'QUEBEC,' GENERAL CONSTRUCTION CO.

Wages	78 00	81 00	75 00	81 00	63 00					378 00
Contingencies	4,640 00	4,210 80	4,463 10	5,715 45	3,288 60					22,317 95
Totals	4,718 00	4,291 80	4,538 10	5,796 45	3,351 60					22,695 95
Working expenses	4,718 00	4,291 80	4,538 10	5,796 45	3,351 60					22,695 95
Totals	4,718 00	4,291 80	4,538 10	5,796 45	3,351 60					22,695 95

DREDGE No. 1, T. F. M. CO.

Wages	81 00	81 00	75 00	81 00	63 00					381 00
Contingencies	3,118 50	2,961 00	1,648 50	3,843 00	42 00					11,613 00
Totals	3,199 50	3,042 00	1,723 50	3,924 00	105 00					11,994 00
Working expenses	3,199 50	3,042 00	1,723 50	3,924 00	105 00					11,994 00
Totals	3,199 50	3,042 00	1,723 50	3,924 00	105 00					11,994 00

Classification of Disbursements of the Dredges during the nine months ended March 31, 1907.

'No. 2' T. F. M. CO.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	73 75	73 50	68 50	73 50	58 00					347 25
Contingencies	3,112 20	2,304 33	1,406 37	2,512 91	1,735 65					11,071 46
Totals	3,185 95	2,377 83	1,474 87	2,586 41	1,793 65					11,418 71
Working expenses	3,185 95	2,377 83	1,474 87	2,586 41	1,793 65					11,418 71
Totals	3,185 95	2,377 83	1,474 87	2,586 41	1,793 65					11,418 71

DREDGE 'No. 4,' GENL. CONST. CO.

Wages	78 00	81 00	75 00	81 00	62 90					377 90
Contingencies	3,161 40	5,607 25	3,606 00	2,431 00	3,107 50					17,913 15
Totals	3,239 40	5,688 25	3,681 00	2,512 00	3,170 40					18,291 05
Working expenses	3,239 40	5,688 25	3,681 00	2,512 00	3,170 40					18,291 05
Totals	3,239 40	5,688 25	3,681 00	2,512 00	3,170 40					18,291 05

DREDGE 'CHATEAUGUAY' L. COHEN & SON.

Wages	65 00	67 50	62 50	57 50						252 50
Contingencies	6,391 00	6,083 00	5,948 25	5,082 00						23,504 25
Totals	6,456 00	6,150 50	6,010 75	5,139 50						23,756 75
Working expenses	6,456 00	6,150 50	6,010 75	5,139 50						23,756 75
Totals	6,456 00	6,150 50	6,010 75	5,139 50						23,756 75

DREDGE 'No. 4, CANADA' L. COHEN & SON.

Wages	72 00	83 00	79 00	72 00						306 00
Contingencies	2,372 70	4,202 10	5,614 50	4,154 70						16,344 00
Totals	2,444 70	4,285 10	5,693 50	4,226 70						16,650 00
Working expenses	2,444 70	4,285 10	5,693 50	4,226 70						16,650 00
Totals	2,444 70	4,285 10	5,693 50	4,226 70						16,650 00

DREDGE 'DUKE OF YORK' W. J. POUPORE.

Wages	91 00	80 59								171 50
Contingencies	5,097 51	4,173 31								9,270 82
Totals	5,188 51	4,253 81								9,442 32
Working expenses	5,188 51	4,253 81								9,442 32
Totals	5,188 51	4,253 81								9,442 32

DREDGE 'CENTRAL CITY' L. COHEN & SON.

Wages	65 00	62 50	42 00	81 00	46 20					296 70
Contingencies	7,927 70	5,017 70	2,425 50	2,620 75	869 00					18,860 65
Totals	7,992 70	5,080 20	2,467 50	2,701 75	915 20					19,157 35
Working expenses	7,992 70	5,080 20	2,467 50	2,701 75	915 20					19,157 35
Totals	7,992 70	5,080 20	2,467 50	2,701 75	915 20					19,157 35

DREDGE 'PONTIAC' W. J. POUPORE.

Wages	65 00	40 60								105 60
Contingencies	4,154 15	825 70								4,979 85
Totals	4,219 15	866 30								5,085 45
Working expenses	4,219 15	866 30								5,085 45
Totals	4,219 15	866 30								5,085 45

CLASSIFICATION of Disbursements of the Dredges during the Nine Months ended March 31, 1907—*Continued*

DREDGE 'PRINCE LOUIS' W. J. POUPORE.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	71 00	78 47	68 50	82 20	39 50					339 67
Contingencies	2,053 23	3,800 40	3,949 12	3,584 96	2,070 64					15,458 35
Totals	2,124 23	3,878 87	4,017 62	3,667 16	2,110 14					15,798 02
Working expenses	2,124 23	3,878 87	4,017 62	3,667 16	2,110 14					15,798 02
Totals	2,124 23	3,878 87	4,017 62	3,667 16	2,110 14					15,798 02

DREDGE 'OTTO,' GENERAL CONSTRUCTION CO.

Wages	78 00	81 00	75 00	81 00	73 50					388 50
Contingencies	2,120 25	689 45	1,703 55	1,687 50	1,441 50					7,642 25
Totals	2,198 25	770 45	1,778 55	1,768 50	1,515 00					8,030 75
Working expenses	2,198 25	770 45	1,778 55	1,768 50	1,515 00					8,030 75
Totals	2,198 25	770 45	1,778 55	1,768 50	1,515 00					8,030 75

DREDGE 'PREMIER,' GENERAL CONSTRUCTION CO.

Wages		30 00	75 00	81 00	33 00					219 00
Contingencies		187 00	1,252 90	3,927 00	1,084 60					6,451 50
Totals		217 00	1,327 90	4,008 00	1,117 60					6,670 50
Working expenses		217 00	1,327 90	4,008 00	1,117 60					6,670 50
Totals		217 00	1,327 90	4,008 00	1,117 60					6,670 50

DREDGE 'ARNOLDI,' MARLTON DREDGING CO.

Wages	58 50	81 00	75 00	81 00	43 14					338 64
Contingencies	3,162 00	4,679 25	2,778 75	3,585 31	1,931 75					16,137 06
Totals	3,220 50	4,760 25	2,853 75	3,666 31	1,974 89					16,475 70
Working expenses	3,220 50	4,760 25	2,853 75	3,666 31	1,974 89					16,475 70
Totals	3,220 50	4,760 25	2,853 75	3,666 31	1,974 89					16,475 70

DREDGE 'No. 1,' C. S. BOONE.

Wages	78 00	81 00	3 00							162 00
Contingencies	4,864 72	3,981 40								8,846 12
Totals	4,942 72	4,062 40	3 00							9,008 12
Working expenses	4,942 72	4,062 40	3 00							9,008 12
Totals	4,942 72	4,062 40	3 00							9,008 12

DREDGE 'KINGSFORD,' C. S. BOONE, DREDGING AND CONSTRUCTION CO.

Wages	78 00	81 14	78 20	92 02						329 36
Contingencies	14,494 30	10,888 20	8,174 20	7,069 05						40,625 75
Totals	14,572 30	10,969 34	8,252 40	7,161 07						40,955 11
Working expenses	14,572 30	10,969 34	8,252 40	7,161 07						40,955 11
Totals	14,572 30	10,969 34	8,252 40	7,161 07						40,955 11

DREDGE 'No. 14,' D. McCARTHY, C. S. BOONE.

Wages	78 00	81 00	75 00	81 00	45 00					360 00
Contingencies	19,337 59	26,214 93	28,320 93	33,605 86	13,539 07					121,018 38
Totals	19,415 59	26,295 93	28,395 93	33,686 86	13,584 07					121,378 38
Working expenses	19,415 59	26,295 93	28,395 93	33,686 86	13,584 07					121,378 38
Totals	19,415 59	26,295 93	28,395 93	33,686 86	13,584 07					121,378 38

CLASSIFICATION OF DISBURSEMENTS of the Dredges during the Nine Month ending March 31, 1907—*Cotinnued.*

DREDGE 'FRANK,' BOWMAN.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	96 60	81 00	75 65	82 00	68 20					403 45
Contingencies	4,284 90	4,986 92	5,200 20	2,891 02	2,266 65					19,629 69
Totals	4,381 50	5,067 92	5,275 85	2,973 02	2,334 85					20,033 14
Working expenses	4,381 50	5,067 92	5,275 85	2,973 02	2,334 85					20,033 14
Totals	4,381 50	5,067 92	5,275 85	2,973 02	2,334 85					20,033 14

DREDGE 'No. 6,' GREAT LAKES, A. F. BOWMAN.

Wages	104 00	148 00	100 00	108 00	104 00					564 00
Contingencies	7,060 96	8,707 82	6,998 33	10,450 68	7,756 23	584 82				41,558 84
Totals	7,134 96	8,855 82	7,098 33	10,558 68	7,860 23	584 82				42,122 84
Working expenses	7,164 96	8,855 82	7,098 33	10,558 68	7,860 23	584 82				42,122 84
Totals	7,164 96	8,855 82	7,098 33	10,558 68	7,860 23	584 82				42,122 84

DREDGE 'No. 2,' DOMINION DREDGE AND CONSTRUCTION CO.

Wages	78 00	81 00	36 00							195 00
Contingencies	2,721 75	1,345 00	1,045 00							5,111 75
Totals	2,799 75	1,426 00	1,081 00							5,306 75
Working expenses	2,799 75	1,426 00	1,081 00							5,306 75
Totals	2,799 75	1,426 00	1,081 00							5,306 75

DREDGE 'ST. LAWRENCE,' MANLEY CO.

Wages	78 00	81 00	75 00	81 00	33 00					348 00
Contingencies	5,241 52	6,230 71	4,915 47	3,533 39	2,280 85					22,201 94
Totals	5,319 52	6,311 71	4,990 47	3,614 39	2,313 85					22,549 94
Working expenses	5,319 52	6,311 71	4,990 47	3,614 39	2,313 85					22,549 94
Totals	5,319 52	6,311 71	4,990 47	3,614 39	2,313 85					22,549 94

DREDGE 'No. 4,' OWEN SOUND DREDGE AND CONSTRUCTION CO.

Wages	91 35	45 65	73 85	81 00	57 70					349 55
Contingencies	2,682 52	1,452 30	2,037 45	2,854 85	1,360 65					10,387 77
Totals	2,773 87	1,497 95	2,111 30	2,935 85	1,418 35					10,737 32
Working expenses	2,773 87	1,497 95	2,111 30	2,935 85	1,418 35					10,737 32
Totals	2,733 87	1,497 95	2,111 30	2,935 85	1,418 35					10,737 32

DREDGE 'OTTAWA,' MANLEY CO.

Wages	78 00	75 00	57 00	54 00						264 00
Contingencies	3,521 44	1,099 51	2,175 60	2,641 29						8,437 48
Totals	3,599 47	1,174 51	2,232 60	1,695 29						8,701 84
Working expenses	3,599 44	1,174 51	2,232 60	1,695 29						8,701 84
Totals	3,599 44	1,171 51	2,232 60	1,695 29						8,701 84

DREDGE 'MEADE,' C. S. BOONE.

Wages	78 00	83 74	75 00	52 41	68 26					357 41
Contingencies	3,247 31	1,730 58	3,069 25	2,937 90	3,087 02					14,072 06
Totals	3,325 31	1,814 32	3,144 25	2,990 31	3,155 28					14,429 47
Working expenses	3,325 31	1,814 32	3,144 25	2,990 31	3,155 28					14,429 47
Totals	3,325 31	1,814 32	3,144 25	2,990 31	3,155 28					14,429 47

CLASSIFICATION OF DISBURSEMENTS of the Dredges during the Nine Months ending March 31, 1907—*Continued.*

DREDGE 'TRENTON', R. WEDDELL.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	72 00	81 00	75 00	77 00						305 00
Contingencies	5,350 50	7,082 20	4,590 00	4,509 00						20,531 70
Totals	5,422 50	7,163 20	4,665 00	4,586 00						20,836 70
Working expenses	5,422 50	7,163 20	4,665 00	4,586 00						20,836 70
Totals	5,422 50	7,163 20	4,665 00	4,586 00						20,836 70

DREDGE 'No. 5, GT. LAKES, A. F. BOWMAN.

Wages	104 00	158 00	100 00	104 00	100 00	25 00				591 00
Contingencies	4,635 75	9,273 00	7,259 10	7,368 18	7,583 54	992 03				37,111 60
Totals	4,739 75	9,431 00	7,359 10	7,472 18	7,683 54	1,017 03				37,702 60
Working expenses	4,739 75	9,431 00	7,359 10	7,472 18	7,683 54	1,017 03				37,702 60
Totals	4,739 75	9,431 00	7,359 10	7,472 18	7,683 54	1,017 03				37,702 60

DREDGE 'DOMINION', A. F. BOWMAN.

Wages	104 00	100 00	78 00	83 40	81 00					446 40
Contingencies	10,717 94	12,384 56	9,567 88	12,470 33	9,864 00	1,540 08				56,544 79
Totals	10,821 94	12,484 56	9,645 88	12,553 73	9,945 00	1,540 08				56,991 19
Working expenses	10,821 94	12,484 56	9,645 88	12,553 73	9,945 00	1,540 08				56,991 19
Totals	10,821 94	12,484 56	9,645 88	12,553 73	9,945 00	1,540 08				56,991 19

DREDGE 'No. 8,' GREAT LAKES DG. CO.

Wages	104 00	108 00	100 00	108 00	104 00					524 00
Contingencies	718 79	2,610 16	1,504 80	3,127 07	4,160 77	679 20				12,800 79
Totals	822 79	2,718 16	1,604 80	3,235 07	4,264 77	679 20				13,324 79
Working expenses	822 79	2,718 16	1,604 80	3,235 07	4,264 77	679 20				13,324 79
Totals	822 79	2,718 16	1,604 80	3,235 07	4,264 77	679 20				13,324 79

DREDGE 'No. 9,' OWEN SOUND DG. & CONST. CO.

Wages	78 80	42 39	47 59	54 00	46 35					269 13
Contingencies	4,991 00	5,121 56	5,236 00	1,768 00	3,277 60					20,394 16
Totals	5,069 80	5,163 95	5,283 59	1,822 00	3,323 95					20,663 29
Working expenses	5,069 80	5,163 95	5,283 59	1,822 00	3,323 95					20,663 29
Totals	5,069 80	5,163 95	5,283 59	1,822 00	3,323 95					20,663 29

DREDGE 'EXCELSIOR,' OWEN SOUND DG. & CONST. CO.

Wages										
Contingencies					6,018 00	442 00				6,460 00
Totals					6,018 00	442 00				6,460 00
Working expenses					6,018 00	442 00				6,460 00
Totals					6,018 00	442 00				6,460 00

Classification of Disbursements of the Dredges during the Nine Months ending March 31, 1907—*Continued.*

DREDGE 'MONARCH,' O. S. DREDGING & CONSTRUCTION CO.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages		42 40	57 58	54 00	46 35					200 33
Contingencies		7,886 86	11,089 22	9,953 50	9,015 10	467 50				38,412 18
Totals		7,929 26	11,146 80	10,007 50	9,061 45	467 50				38,612 51
Working expenses		7,929 26	11,146 80	10,007 50	9,061 45	467 50				38,612 51
Totals		7,929 26	11,146 80	10,007 50	9,061 45	467 50				38,612 51

DREDGE 'KING EDWARD,' WINDSOR DREDGING CO., LTD.

Wages			18 00	81 00	78 00	9 50				186 50
Contingencies				530 00	1,840 00					2,370 00
Totals			18 00	611 00	1,918 00	9 50				2,556 50
Working expenses			18 00	611 00	1,918 00	9 50				2,556 50
Totals			18 00	611 00	1,918 00	9 50				2,556 50

DREDGE 'No. 3,' DOMINION DREDGING CO.

Wages	78 00	73 38	39 24							190 62
Contingencies	3,960 00	3,267 00	2,520 00	25 00						9,772 00
Totals	4,038 00	3,340 38	2,559 24	25 00						9,962 62
Working expenses	4,038 00	3,340 38	2,559 24	25 00						9,962 62
Totals	4,038 00	3,340 38	2,559 24	25 00						9,962 62

DREDGE 'SIMCOE,' BROWN & AYLMER.

Wages	6 00			69 00	51 00					126 00
Contingencies	246 00			2,172 50	1,622 00					4,040 50
Totals	252 00			2,241 50	1,673 00					4,166 50
Working expenses	252 00			2,241 50	1,673 00					4,166 50
Totals	252 00			2,241 50	1,673 00					4,166 50

DREDGE 'I. X. L.,' WEDDELL CO.

Wages	104 00	108 00	100 00	108 00	104 00					524 00
Contingencies	5,367 88	5,373 39	4,119 68	6,617 61	4,185 42					25,663 98
Totals	5,471 88	5,481 39	4,219 68	6,725 61	4,289 42					26,187 98
Working expenses	5,471 88	5,481 39	4,219 68	6,725 61	4,289 42					26,187 98
Totals	5,471 88	5,481 39	4,219 68	6,725 61	4,289 42					26,187 98

Classification of Disbursements of the Dredges during the Nine Months ended March 31, 1907.

DREDGE 'HANEY' HANEY & MILLER.

Items.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Wages	125 00	125 00	125 00	125 00	125 00					625 00
Contingencies	1,189 35	727 00	1,015 65	838 05	1,021 20	49 95				4,841 25
Totals	1,314 35	852 05	1,140 65	963 05	1,146 20	49 95				5,466 25
Working expenses	1,314 35	852 05	1,140 65	963 05	1,146 20	49 95				5,466 25
Totals	1,314 35	852 05	1,140 65	963 05	1,146 20	49 95				5,466 25

DREDGE 'TOGO' R. WADDELL.

Wages		51 00	75 00	81 00	82 17					289 17
Contingencies		339 15	5,308 80	4,621 75	3,059 00					13,328 70
Totals		390 15	5,383 80	4,702 75	3,141 17					13,617 87
Working expenses		390 15	5,383 80	4,702 75	3,141 17					13,617 87
Totals		390 15	5,383 80	4,702 75	3,141 17					13,617 87

DREDGE 'E. HALL, NO. 1,' S. B. L. T. & SALT CO.

Wages	79 04	27 00								106 04
Contingencies	1,655 80	1,217 20								2,873 00
Totals										2,979 04
Working expenses	1,734 84	1,244 20								2,979 04
Totals	1,734 84	1,244 20								2,979 04

DREDGE 'ONTARIO' CHATHAM DREDGING CO.

Wages	45 00									45 00
Contingencies	1,055 40									1,055 40
Totals	1,100 40									1,100 40
Working expenses	1,100 40									1,100 40
Totals	1,100 40									1,100 40

DREDGE 'ST. PIÉRRE' A. ST. PIERRE.

Wages	24 50	67 50	62 50	67 50	45 50					267 00
Contingencies	807 30	2,694 25	1,556 10	2,709 00	1,917 00					9,683 65
Totals	831 80	2,761 75	1,618 60	2,776 50	1,962 00					9,950 65
Working expenses	831 80	2,761 75	1,618 60	2,776 50	1,962 00					9,950 65
Totals	831 80	2,761 75	1,618 60	2,776 50	1,962 00					9,950 65

CLASSIFICATION AND QUANTITIES of Material removed by Dredges during the Nine Months ending March 31, 1907.

DREDGE 'DUKE OF YORK.'

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Material other than rock	.....	2,835	36,045	32,655	19,890	.....	.....	.....	.....	91,425
	46,341	32,921	.....	.....	.....	.....	.....	.....	.....	79,262
Totals	46,341	35,756	36,045	32,655	19,890	.....	.....	.....	.....	170,687

DREDGE 'CENTRAL CITY.'

Material other than rock	24,010	14,350	9,660	9,530	3,160	.....	.....	.....	.....	60,710
Totals	24,010	14,350	9,660	9,530	3,160	.....	.....	.....	.....	60,710

DREDGE 'PRINCE LOUIS.'

Material other than rock	20,409	47,505	49,364	39,277	18,824	.....	.....	.....	.....	175,379
Totals	20,409	47,505	49,364	39,277	18,824	.....	.....	.....	.....	175,379

DREDGE 'ST. PIERRE.'

Material other than rock	7,980	19,045	10,750	20,670	10,170	.....	.....	.....	.....	68,525
Totals	7,980	19,045	10,750	20,670	10,170	.....	.....	.....	.....	68,525

DREDGE 'OTTO.'

Material other than rock	6,475	2,125	5,455	5,400	4,650					24,105
Totals	6,475	2,125	5,455	5,400	4,650					24,105

DREDGE 'PREMIER.'

Material other than rock		1,100	7,370	23,100	6,380					37,950
Totals		1,100	7,370	23,100	6,380					37,950

DREDGE 'NITHSDALE.'

Material other than rock	3,220	3,430	2,240	1,750	2,450					13,090
Totals	3,220	3,430	2,240	1,750	2,450					13,090

DREDGE 'PROGRESS.'

Material other than rock	18,400	14,900	14,300	5,550	3,150					56,300
Totals	18,400	14,900	14,300	5,550	3,150					56,300

DREDGE 'RICHELIEU.'

Material other than rock	8,200	8,450	3,900	3,625	2,350					26,525
Totals	8,200	8,450	3,900	3,625	2,350					26,525

DREDGE 'INTERNATIONAL.'

Material other than rock	8,250	12,750	7,500	20,250	6,500					55,250
Totals	8,250	12,750	7,500	20,250	6,500					55,250

CLASSIFICATION AND QUANTITIES of Material removed by Dredges during the Nine Months ending March 31, 1907—*Continued.*

DREDGE 'SIR RICHARD.'

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Material other than rock	16,400	15,300	15,400	16,100	8,800					72,000
Totals	16,400	15,300	15,400	16,100	8,800					72,000

DREDGE 'CHALLENGE.'

Material other than rock	8,450	10,300	12,050	10,400						41,200
Totals	8,450	10,300	12,050	10,400						41,200

DREDGE 'NIPISSING.'

Material other than rock	17,025	10,575		1,500	1,300					30,400
Totals	17,025	10,575		1,500	1,300					30,400

DREDGE 'ONTARIO.'

Material other than rock	8,055	5,780	5,490		9,465					28,790
Totals	8,055	5,780	5,490		9,465					28,790

DREDGE 'ST. LOUIS.'

Material other than rock	4,497	4,905	4,950	5,175	720					22,247
Totals	4,497	4,905	4,950	5,175	720					22,247

DREDGE 'QUEEN.'

Material other than rock	7,668	10,224	9,696	8,640	720					36,948
Totals	7,668	10,224	9,696	8,640	720					36,948

DREDGE 'MATTAWA.'

Material other than rock	13,400	16,400	11,200	9,800	2,800					53,600
Totals	13,400	16,400	11,200	9,800	2,800					53,600

DREDGE 'ARNOLDI.'

Material other than rock	13,860	15,045	9,795	6,380	1,622					46,702
Totals	13,860	15,045	9,795	6,380	1,622					46,702

DREDGE 'No. 1 BOONE.'

Material other than rock	14,308	11,710								26,018
Totals	14,308	11,710								26,018

DREDGE 'KINGSFORD.'

Material other than rock	6,340	1,898	3,554	5,028	894					17,715
Totals	6,340	1,898	3,554	5,028	894					17,715

DREDGE 'No. 14 BOONE.'

Rock	11,154	16,488	16,339	19,388	7,811					71,180
Totals	11,154	16,488	16,339	19,388	7,811					71,180

CLASSIFICATION AND QUANTITIES of Material removed by Dredges during the Nine Months ending March 31, 1907—*Continued.*

DREDGE 'FRANK.'

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Material other than rock	37,260	3,375		11,475	19,710					71,820
		38,070	43,335	13,095						94,500
Totals	37,260	41,445	43,335	24,570	19,710					166,320

DREDGE 'No. 6 G. L. D. Co.'

Material other than rock	77,624	69,542	55,533	87,089	66,693	6,498				362,979
Totals	77,624	69,542	55,533	87,089	66,693	6,498				362,979

DREDGE 'ONTARIO, C. D. Co.'

Material other than rock	7,036									7,036
Totals	7,036									7,036

DREDGE 'No. 2,' D. D. CO.

Material other than rock	10,887	5,200	4,180							20,267
Totals	10,887	5,200	4,180							20,267

DREDGE 'ST. LAWRENCE.'

Material other than rock	22,637	15,983	19,139	12,622	1,770					72,151
Totals	22,637	15,983	19,139	12,622	1,770					72,151

DREDGE 'No. 4,' O. S. D. CO.

Material other than rock	22,830	12,360	17,340	24,180	11,580					88,290
Totals	22,830	12,360	17,340	24,180	11,580					88,290

DREDGE 'OTTAWA.'

Material other than rock	15,556	5,928								18,484
Rock		7,828	15,540	11,718						35,086
Totals	15,556	13,756	15,540	11,718						53,570

DREDGE 'MEADE.'

Material other than rock	24,508	13,061	20,995	19,918	20,929					99,411
Totals	24,508	13,061	20,995	19,918	20,929					99,411

DREDGE 'TRENTON.'

Material other than rock	18,450	13,580	30,600	30,060						92,690
Totals	18,450	13,580	30,600	30,060						92,690

DREDGE 'No. 5,' G. L. D. CO.

Material other than rock	50,951	100,262	75,000	78,142	76,649	10,649				391,653
Totals	50,951	100,262	75,000	78,142	76,649	10,649				391,653

DREDGE 'DOMINION.'

Material other than rock	118,332	135,834	101,398	124,423	101,643	17,112				598,742
Totals	118,332	135,834	101,398	124,423	101,643	17,112				598,742

CLASSIFICATION AND QUANTITIES of Material removed by Dredges during the Nine Months ending March 31, 1907—*Continued.*

DREDGE 'No. 8,' GREAT LAKES DREDGE CO.

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Material other than rock	6,427	21,182	16,720	31,619	42,525	6,792				125,265
Totals	6,427	21,182	16,720	31,619	42,525	6,792				125,265
DREDGE 'No. 9,' OWEN SOUND DREDGE AND CONSTRUCTION CO.										
Material other than rock	6,200	11,734	15,400	14,600	9,640					57,574
Rock	1,400	566								1,966
Totals	7,600	12,300	15,400	14,600	9,640					59,540
DREDGE 'EXCELSIOR.'										
Material other than rock					17,700	1,300				19,000
Totals					17,700	1,300				19,000
DREDGE 'MONARCH.'										
Material other than rock		6,279	10,633	19,875	26,515	1,375				64,677
Rock		2,876	3,737							6,613
Totals		9,153	14,370	19,875	26,515	1,375				71,290
DREDGE 'KING EDWARD.'										
Material other than rock			200	1,920	7,360					9,480
Totals			200	1,920	7,360					9,480

DREDGE 'No. 3,' DOMINION DREDGE CO.

Material other than rock	22,000	18,150	14.000							54,150
Totals	22,000	18,150	14,000							54,150

DREDGE 'SIMCOE.'

Material other than rock	984	7,042	5,040							13,066
Totals	984	7,042	5,040							13,066

DREDGE 'I.X.L.'

Material other than rock	56,504	56,562	43,365	69,659	44 057					270 147
Totals	56,504	56,562	43,365	69,659	44 057					270 147

DREDGE 'HANEY.'

Material other than rock	7,448	4,847	6,771	5,587	6,808	333				31,794
Totals	7,448	4,847	6,771	5,587	6,808	333				31,794

DREDGE 'TOGO.'

Material other than rock		969	15,168	13,205	8,740					38,078
Totals		969	15,168	13,205	8,740					38,078

DREDGE 'E. HALL, NO. 1.'

Material other than rock	9,740	7,160								16,900
Totals	9,740	7,160								16,900

CLASSIFICATION AND QUANTITIES of Material removed by Dredges during the Nine Months ended March 31, 1906—*Continued.*

DREDGE 'No. 5, R. McD.'

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Material other than rock		20,584								20,584
Totals		20,584								20,584

DREDGE 'No. 6, R. McD.'

Material other than rock			27,420	31,540	26,700					85,660
Totals			27,420	31,540	26,700					85,660

DREDGE 'LITTLE GIANT.'

Material other than rock	18,830	15,760	13,340	22,300	17,050					87,280
Totals	18,830	15,760	13,340	22,300	17,050					87,280

DREDGE 'QUEBEC.'

Material other than rock	16,000	14,520	14,355	15,390	11,340					71,605
Rock			1,035							1,035
Totals	16,000	14,520	15,390	15,390	11,340					72,640

DREDGE 'No. 1,' T.F.M.Co.

Material other than rock	14,850	14,100	8,350	10,950	6,850					55,100
Totals	14,850	14,100	8,350	10,950	6,850					55,100

DREDGE 'No. 2,' T.F.M.Co.

Material other than rock	14,820	10,973	7,125	11,543	8,265					52,726
Totals	14,820	10,973	7,125	11,543	8,265					52,726

DREDGE 'No. 4,' G.C.C.

Material other than rock	5,748	10,195	4,570	3,945	5,650					30,108
Rock			230	55						285
Totals	5,748	10,195	4,800	4,000	5,650					30,393

DREDGE 'CHATEAUGUAY.'

Material other than rock	23,240	22,120	21,630	18,480						85,470
Totals	23,240	22,120	21,630	18,480						85,470

DREDGE 'CANADA.'

Material other than rock	7,190	9,550	9,850	12,590						39,180
Rock		100								100
Totals	7,190	9,650	9,850	12,590						39,280

DREDGE 'PONTIAC.'

Material other than rock		14,590								14,590
	28,595	16,440								45,035
Totals	28,595	31,030								60,625

CLASSIFICATION and Quantities of Material removed by Dredges during the Nine Months ended March 31, 1907—*Concluded.*

DREDGE 'I.X.L.'

Description of Material Dredged.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Grand Total.
	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.	Yds.
Material other than rock	56,504	56,562	43,365	69,659	44,057					270,147
Totals	56,504	56,562	43,365	69,659	44,057					270,147

DREDGE 'SIMCOE.'

Material other than rock	984	7,042	5,040							13,066
Totals	984	7,042	5,040							13,066

PROVINCE OF MANITOBA.

DREDGING ASSINIBOINE RIVER IN THE VICINITY OF WINNIPEG.

During the past season, an orange peel excavator has been employed in removing boulders and other obstructions to navigation, in the St. James rapids, Assiniboine river.

For the purpose, a scow belonging to the plant taken over at St. Andrews has been fitted with an orange peel bucket and hoisting engine.

Considering the small initial outlay in fitting up, and that the dredge is easily handled with a crew of five, very economical work has been done with this dredge.

From July 1 to October 22, a distance of 8,280 feet was cleared of obstructions for an average width of 45 feet. The material excavated which consisted mostly of boulders and gravel, was cast to both sides, and it was therefore impossible to form any idea of the amount of material moved.

Navigation of the Assiniboine river from Winnipeg upwards is only possible at high stages of the water, and as there is a considerable fall in the river slope, due to the St. James rapids, it is questionable if much improvement can be effected by dredging in these rapids. Dredging is likely to increase the discharge capacity of the river and accelerate the annual low water period.

A system of low water reaches and locks in conjunction with dams would seem to be the solution for permanent and continuous navigation.

The expenditure on this work for the fiscal year was $2,004.40.

Of this amount $306 was incurred in towing dredge.

DREDGING LAKE MANITOBA.

The unusually low water this season has occasioned considerable difficulty to navigation on Lake Manitoba. The Manitoba Gypsum Company are the principal shippers on Lake Manitoba and transport gypsum and plaster of paris from their quarry and mill at Gypsumville, north end of the lake, to Westbourne Landing, on the White Mud river. During the season, dredge *Manitoba* operated from July 1 to 25, and August 25 to October 10, at Gypsumville, in dredging out a channel to the Manitoba Gypsum Company's landing. A total of 8,653 cubic yards of hard-pan, clay and boulders were removed.

From July 26 to 31 and October 11 to 19, 3,266 cubic yards of sand, clay and boulders were removed in making a channel from deep water to the docks at Einarrson's landing, Lake Manitoba. From August 4 to 10, 2,671 cubic yards were removed in increasing the depth of the channel at the mouth of the White Mud river. This material consisted of fine sand and clay, and exists in the form of a bar caused by alluvial deposit carried down by the White Mud river.

From October 21 to 30, 2,012 cubic yards of fine sand and clay were removed in increasing the depth at the Manitoba Gypsum Company's landing, at Totogan, on the White Mud river.

The total material removed during the season amounted to 16,602 cubic yards at a cost of $5,321.41.

The detentions were 21 days from heavy winds and 15 days from repairs to dredge and scow.

Dredge *Manitoba* and equipment was laid up at winter quarters on October 30, at Westbourne Landing.

DREDGING MOUTH OF RED RIVER, LAKE WINNIPEG.

The dredging at the mouth of the Red river has been confined, this season, to the maintenance of the old channel. The past season has been one of unprecedented low water and storms. New low water elevations have been established on all the lakes and rivers throughout the province. A sufficient depth was maintained throughout the season to afford satisfactory navigation. The maintenance of this channel involves considerable difficulty, as the channel is exposed to the prevailing winds and there is a long tow for shelter.

During the season, 29 days were lost owing to heavy winds and considerable time was taken up in towing in and out to position.

From July 1 to October 5, a total quantity of 27,750 cubic yards was removed. The material consisted of alluvial deposit of fine sand and clay. The expenditure on this work was $7,550.37, a cost of 27·20 cents per cubic yard. From November 1 to 8, dredge *Winnipeg* and equipment were laid up in winter quarters and the machinery overhauled preparatory to having repairs made for next season's operations.

A study of the conditions existing at the mouth of the Red river has been made, and during the month of March a hydrographic survey of the old and new channels was made. Soundings were carried out in both of these channels to the 9 foot low water contour, and permanent gauges and triangulation points on shore established. It is expected that from the data obtained from this survey we shall be in a position to have dredging done at the most advantageous places.

The annual maintenance of the old channel at the mouth of the Red river entails considerable work of a costly nature, due to the fact that about 1½ miles of dredging is required in a locality exposed to storms. As noted previously, considerable time is lost from bad weather and also in towing, the distance from shelter to end of dredged channel is 2¼ miles.

DREDGING IN MOSSY RIVER, WINNIPEGOSIS.

During the past season dredge *Priestman* was employed in maintaining the channel leading out to deep water on Lake Winnipegosis, at the mouth of the Mossy river.

The bar at the mouth of this river is characteristic of those formed at the mouths of all rivers passing through light prairie earth and clay, and is alluvial deposit which accumulates yearly, and needs constant dredging.

Dredging was carried on during the period from July 2 to October 20, during which period the loss of time due to heavy winds was twenty days.

A total quantity of 13,643 cubic yards of fine sand and clay was removed, at a cost of $4,537.04.

DREDGING WEST SLOUGH, SELKIRK.

From October 8 to November 1, dredge *Winnipeg* removed an amount of 4,260 cubic yards from the Slough, Selkirk, in connection with the forming of a turning basin at the dock of the Dominion Fish Company, and also in giving a sufficient depth for the fleet using the Slough for winter quarters.

The cost of this dredging was $990.94.

DREDGE VESSEL REPAIRS.

The various dredges and equipment have been thoroughly overhauled and repairs effected this spring, for next season's work.

Dredge *Priestman*.—Repairs to hoisting drum and new hoisting chain purchased.

Dredge *Manitoba*.—New oak anchors; new dipper arms with reinforcing angles; swing joint for main steampipe; gate bars for boiler of tug *Carberry*. Scow hauled up, repaired, planked and caulked.

Dredge *Crane*.—New steel points for orange peel bucket and repairs to bucket; new set of guide sheaves and plates for hoisting cable; new boiler tubes for hoisting engine.

Dredge *Winnipeg*.—A new locomotive tube boiler was built under contract with the Manitoba Iron Works and installed. New hoisting drum; swinging table strengthened and reinforced with iron angles.

Tug *Sir Hector*.—Repairs and caulking and coal and dump scows. A new hull will be required for the season of 1907-8, as the present hull is twenty-three years old. The present hull has been inspected and condemned by the steamboat inspector.

PROVINCE OF BRITISH COLUMBIA.

DREDGING—BRITISH COLUMBIA.

This service covers, ordinarily, the running expenses of the hydraulic dredge *King Edward* on the Fraser river, and those of the snag boat *Samson*. In addition, owing to the appropriation for Victoria harbour being exhausted, we were allowed to charge the expenditure in connection with the dredge *Mud Lark* to the above appropriation. The details of the expenditure are as follows:—

(a) Dredge *King Edward*—		
Wages	$10,359 22	
Material	2,622 67	
Provisions	2,786 82	
Fuel	4,017 00	
Water	5 90	
Tug-hire	2,460 50	
Contingencies	82 05	
		$22,234 16
(b) Snag boat *Samson*—		
Wages	$6,415 71	
Material	1,202 15	
Provisions	1,863 57	
Fuel	1,382 62	
Water	46 06	
Tug-hire	70 00	
Contingencies	44 45	
		10,960 56
(c) Dredge *Mud Lark*—		
Wages	$4,087 19	
Material	602 07	
Provisions	618 53	
Fuel	765 00	
Water	23 35	
		6,096 14
Total		$39,390 86

KENNEDY LAKE.

The work of improving the outlet from this lake to salt water, in connection with Anderson lake, has been in progress for some years, and is, I consider, now practically completed. Owing to the unusually wet season of the past year, we were interrupted by high water at the time usually considered the most favourable for this work. The expenditure has been as follows:—

Wages	$1,075 39
Material	148 87
Provisions	206 31
Total	$1,430 57

VICTORIA HARBOUR.

The dredge *Mud Lark* and our drilling plant have been continuously employed on this work during the past fiscal year, to the gradual improvement of harbour and docking facilities at the new Canadian Pacific Railway wharfs and those of the Alaska Trading Company, as well as at the outer wharf. General work has, in addition, been done on the entrance channel, when plant was not otherwise engaged. The expenditure has been as follows:—

Mud Lark—

Wages	$7,208 95	
Provisions	1,875 62	
Material	1,310 63	
Fuel	1,507 50	
Water	37 15	
Contingencies	1 50	
		$11,941 35

Drilling plant—

Wages	$5,757 50	
Material	1,954 76	
Fuel	326 50	
Water	4 25	
		8,043 01
Total		$19,984 36

NEW DREDGING PLANT.

The expenditure under this head has been in connection with the construction of the hull and upper works of the new snag boat for the Skeena river. The engines and machinery are under contract by the Schaake Machinery Works here, and will be installed as soon as completed. A delay has been entailed in getting the boiler plates, and she will hardly be completed in time to be of use on the Skeena this year. She can, however, be housed in the government boom here and placed in commission in the early spring or so soon as the Skeena river is clear of ice and will admit of her working.

In addition to the above, there is a charge for some alterations and equipment of the tug *Petrel,* outside of the contract, and chargeable to this service.

The details of the expenditure are as follows:—

Skeena snag boat—

Wages	$5,057 36	
Material	4,114 56	
		$9,171 92

Steamer *Petrel*—

Material	$ 813 82	
		813 82
Total		$9,985 74

DREDGE REPAIRS—BRITISH COLUMBIA.

Owing to an accident and collapse of the 'A' frame of the dredge *King Edward* in July, 1906, and the installation of a new suction pipe, the repairs have been unusually heavy.

The expenditure in connection with the different vessels, under the head of 'Repairs' has been as follows:—

(*a*) Dredge *King Edward*—		
Ordinary	$3,053 50	
Extraordinary	701 70	
		$3,755 20
(*b*) Snag boat *Samson*—		
Ordinary	$1,532 04	
		1,532 04
(*c*) Dredge *Mud Lark*—		
Ordinary	$2,565 19	
Extraordinary	1,383 50	
		3,948 69
Total		$9,235 93

DREDGING PLANT UNDER THE CONTROL OF THE DEPARTMENT OF PUBLIC WORKS, 1907.

MARITIME PROVINCES.

'St. Lawrence' self-propelling elevator dredge.

Length over all—170·0 feet.
Beam—30·0 feet.
Least working depth—8·5 feet.
Greatest working depth—28·0 feet.
Capacity of hopper—350 cubic yards.
Daily dredging in hard material—350 to 700 cubic yards.
Daily dredging in ordinary earth—750 to 1,000 cubic yards.
Daily dredging in soft earth—1,050 to 1,400 cubic yards.

'Canada' self-propelling elevator dredge.

Length over all—130·0 feet.
Beam—20·0 feet.
Least working depth—7·0 feet.
Greatest working depth—16·0 feet.
Capacity of hopper—90 cubic yards.
Daily dredging in hard bottom—180 to 270 cubic yards.
Daily dredging in ordinary material—180 to 360 cubic yards.
Daily dredging in soft material—360 to 450 cubic yards.

'Prince Edward' spoon dredge.

Length—80 feet.
Width—28 feet.
Greatest working depth—21 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging in ordinary material—500 cubic yards.
Daily rate of dredging in soft material—700 cubic yards.
Number of accompanying dump scows or barges, 3.
Capacity of bucket or spoon, 1½ cubic yards.

'Geo. McKenzie' spoon or dipper dredge (wooden hull).

Length—90 feet.
Width—28 feet.
Greatest working depth—22 feet.
Daily rate of dredging in hard material—350 cubic yards.
Daily rate of dredging in ordinary bottom—500 cubic yards.
Daily rate of dredging in soft material—600 cubic yards.
Number of dump scows or barges used—3.

'Cape Breton' boom and dipper dredge (steel hull).

Length—91 feet.
Beam—36 feet.
Greatest working depth—34 feet.
Daily rate of dredging in hard material—1,000 cubic yards.
Daily rate of dredging in ordinary bottom—1,500 cubic yards.
Daily rate of dredging in soft bottom—2,000 cubic yards.

The spoon 'New Dominion' (wooden hull).

Length over all—90 feet.
Width—28 feet.
Greatest working depth—21 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging in ordinary material—450 cubic yards.
Daily rate of dredging in soft material—600 to 700 cubic yards.

The clam shell dredge 'New Brunswick' (wooden hull).

Length over all—90 feet.
Width—25 feet.
Greatest working depth—17 feet.
Daily rate of dredging in hard material—180 cubic yards.
Daily rate of dredging in ordinary material—300 cubic yards.
Daily rate of dredging in soft material—650 cubic yards.

The 'W. S. Fielding' combined elevator and hydraulic hopper dredge.

Length—250 feet.
Beam—42 feet.
Depth—18 feet.
Working depth—60 feet.
Capacity of hoppers—1,000 cubic yards.
Daily output of buckets—2,600 cubic yards.

The Spoon Dredge 'Montague' (steel hull).

Length over all—90 feet.
Width—37 feet 8 inches.
Draught—5 feet 6 inches.
Greatest working depth—28 feet.
Daily rate of dredging, 10 hours—1,000 cubic yards.
Number of barges used (each 72 feet long 19 feet 8 inches wide, depth 7 feet)—2.

The Sand Pump Dredge 'Northumberland' (steel hull).

Length—130 feet.
Agitator—65 feet.
Width—52 feet.
Draught—7 feet.
Working depth—40 feet.
Daily working capacity—4,000 cubic yards in ten hours.

Tug 'Cricket.'

Length—36·5 feet.
Beam—7·3 feet.
Draught—3·10 feet.
Horse-power—4.

Tug 'Rona.'

Length—85·0 feet.
Beam—19·3 feet.
Draught—8·0 feet.
Horse-power—25.
One pile driver, with boiler and engine mounted on scow.
One stone lifter with large grips (no boiler).

QUEBEC AND ONTARIO.

'Queen' dipper dredge.

Length—65·3 feet.
Beam—25·0 feet.
Greatest working depth—17·0 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging in ordinary material—400 cubic yards.
Daily rate of dredging in soft material—600 cubic yards.
(Dredge attended by tug *Sensation* and two dump scows) of 30 cubic yards capacity.

'Nipissing' dipper dredge.

Length—70·7 feet.
Beam—25·0 feet.
Greatest working depth—20·0 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging in soft material—800 cubic yards.
Daily rate of dredging in ordinary material—500 cubic yards.
Capacity of bucket—3 cubic yards.
(Attended by tug *Deslisle,* 2 dump scows and 1 coal tender.)

'Ontario' dipper dredge.

Length—75·0 feet.
Beam—25·0 feet.
Greatest working depth—22·0 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging in ordinary material—500 cubic yards.
Daily rate of dredging in soft material—800 cubic yards.
(Attended by tug *Sir John* and 2 dump scows.)

'Challenge' dipper dredge.

Length—70·5 feet.
Beam—25·0 feet.
Greatest working depth—21·10 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging in ordinary material—500 cubic yards.
Daily rate of dredging in soft material—800 cubic yards.
(Attended by tug *Trudeau* and 2 dump scows.)

'St. Louis' spoon dredge.

Length—50·0 feet.
Beam—14·0 feet.
Greatest working depth—12·0 feet.
Daily rate of dredging in hard material—50 cubic yards.
Daily rate of dredging in soft material—300 cubic yards.
(Attended by tug *Daisy* and 2 dump scows.) Used only in light work.

'Twin stone lifter' (catamaran).

Length of each wooden hull—42·0 feet.
Beam of each wooden hull—8·5 feet.
Distance between hulls—7·0 feet.

'Reserve' wooden scow.

Length—59·0 feet.
Beam—17·0 feet.
Capacity—100 tons.

'Sir Richard' dredge.

Length—80·0 feet.
Beam—28·0 feet.
Greatest working depth—22·0 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging in ordinary material—500 cubic yards.
Daily rate of dredging in soft material—800 cubic yards.
Capacity of bucket—3 cubic yards.
(Dredge attended by tug *St. Paul.*)

'Richelieu' dredge.

Length—70·0 feet.
Beam—22·0 feet.
Daily rate of dredging in ordinary material—400 cubic yards.
(Attended by tug *Ottawa* and 2 dump scows.)

'Steam stone lifter' centre well.

Length—25·0 feet.
Beam—23·0 feet.
Depth—4·0 feet.
(Attended by 130-foot scow as coal tender.)

'St. Maurice' dredge.

(A small dredge used on the River St. Maurice only.)
Tug *Annette* and stone lifter.

'Lake St. John dredge.'

(A small dredge used in Lake St. John only.)
Tug *Marie-Louise* on Lake St. John.

'International' dipper dredge.

Length—109·6 feet.
Beam—41·0 feet.
Greatest working depth—60·0 feet.
Daily dredging, in hard material—1,000 cubic yards.
Daily dredging, in ordinary material—1,500 cubic yards.
Daily dredging in soft material—2,000 cubic yards.

'Progress' dredge.

Length—90·10 feet.
Beam—39·2 feet.
Greatest working depth—30·0 feet.
Daily rate of dredging in hard material—500 cubic yards.
Daily dredging in ordinary material—1,000 cubic yards.
Daily dredging in soft material—1,500 cubic yards.
(Dredge attended by tug *Monitor* and 3 scows.)

'Mattawa' dipper dredge.

Length—75·0 feet.
Beam—25·0 feet.
Greatest working depth—25·0 feet.
Daily rate of dredging in ordinary material—1,000 cubic yards.
(Dredge attended by tug *Catherine* and 2 dump scows.)

'Dredge No. 1' on River St. Louis Feeder.

Length—55·0 feet.
Beam—20·0 feet.
Greatest working depth—12·0 feet.
Daily rate of dredging—300 to 400 yards.

'Dredge No. 2' dipper dredge.

Length—60·0 feet.
Beam—22·0 feet.
Greatest working depth—14·0 feet.
Daily rate of dredging, ordinary material—400 cubic yards.

'Dredge No. 6' dipper dredge.

Length—97 feet.
Beam—36·4 feet.
Greatest working depth—35 feet.
Daily rate of dredging ordinary material—1,500 cubic yards.
(Tugs *Speedy, Montmorency, Blanche.* Schooner *Rutherford.*)

MANITOBA.

'Winnipeg' dipper dredge.

Length—71·0 feet.
Beam—25·0 feet.
Greatest working depth—20·0 feet.
Daily rate of dredging in hard material—300 cubic yards.
Daily rate of dredging in ordinary material—500 cubic yards.
Daily rate of dredging in soft material—800 cubic yards.

'Manitoba' dipper dredge.

Length—60 feet.
Beam—24 feet.
(Dredge attended by tug *Victoria* and two dump scows.)

'Priestman,' barge and clam shell dredge.

A small dredge, old and not much good.

'Crane,' orange peel dredge.

A scow fitted up as a dredge.

BRITISH COLUMBIA.

'King Edward' propelling hydraulic dredge.

Length—125 feet.
Beam—32 feet.
Greatest working depth—40 feet.

'Mud Lark' dipper dredge.

Length—90 feet.
Beam—30 feet.
Greatest working depth—40 feet.
Daily rate of dredging in hard material—300 to 400 cubic yards.
Daily rate of dredging in ordinary material—500 to 600 cubic yards.
Daily rate of dredging in soft material—800 cubic yards.
(Dredge attended by tug *Princess* and three dump scows).

'Nakusp,' self-propelling dipper dredge.

Length—80 feet.
Beam—25 feet.
Boom—50 feet.
Dipper capacity—$\frac{3}{4}$ foot.

Tug boat 'Muskrat II.'

Length—80 feet.
Beam—20 feet.

'Samson' snag boat.

Length—115 feet.
Beam—30 feet.

'Petrel' and tender.

Length—85 feet.
Beam—17 feet.
Horse-power—280.

DRY DOCKS.

The Dominion government owns and operates three dry docks, viz.: the Lorne dry dock, at Lévis, in the province of Quebec; the Kingston dry dock, at Kingston, in the province of Ontario, and the Esquimalt dry dock, at Esquimalt, near the city of Victoria, in British Columbia.

LÉVIS DRY DOCK.

This dock was kept in an efficient manner during the fiscal year 1906-7. The usual repairs required for the proper maintenance of this property were carried on during the year.

The total expenditure incurred to March 31, 1907, was $10.209.77.

Total amount of revenue, $6,903.29.

KINGSTON DRY DOCK.

During the past year the dock has been occupied 128 days by twenty ships with a total tonnage of 65,941 tons. Revenue collected was $19,627.04.

Besides the docking and undocking of ships, the work of renewing the old box drain around the dock has been carried on throughout the year and it is now nearly all replaced by vitrified pipe.

Trenches have been dug and sewer pipes laid to the office and other buildings, so that patent closets can be installed.

The engines and boilers have been carefully attended and repaired when necessary as well as the pumps and drains, so that the whole plant is in an efficient state of repair.

Scows, boats and rafts have been repaired and are kept at all times in readiness for use.

Leaves and other objectionable matters have been cleaned off the grounds and the place kept in a proper manner.

Expenditure during fiscal year 1906-7, $4,213.41.

ESQUIMALT GRAVING DOCK.

This service shows a material increase in receipts over previous years, even when Esquimalt harbour was occupied by His Majesty's ships, as a naval station, and it is to be hoped that the commercial requirements will continue to yield so satisfactory a result.

The usual list of ships docked and revenue collected for the past nine months, constituting the fiscal year of 1906-7, will be found in report of collector of revenue, part 6.

The expenditure for maintenance and repairs remains practically a constant annual quantity of $15,000, and, for the past abbreviated fiscal year, was as follows:—

Wages	$ 6,331 22
Material	1,363 65
Telephone	89 40
Water	756 30
Typewriter	105 00
Contingencies	14 87
Fuel	1,402 50
Electric light	27 92
Total	$ 10,090 86

YAMASKA LOCK.

The River Yamaska flows through the county of the same name and empties into the St. Lawrence, on the southern shore at the head of Lake St. Peter, eight miles below Sorel.

The construction of the lock and dam, commenced in August, 1881, was completed at the end of August, 1885. The total cost of the construction amounts to $87,465.43.

By the construction of these works, and by dredging done subsequently in the channel below the lock, the river has been rendered navigable for vessels of moderate draught (5 feet 6 inches) up to Belle Pointe or St. Aimé, a distance of twenty miles.

The dam of the 'Petit Chenal' requiring to be renewed, material was purchased, the work to be done at low water.

Total expenditure in 1906-7, $2,814.97.

SLIDES AND BOOMS.

The Dominion government owns and operates slides and boom works, built to facilitate the passage of square timber, round logs, flatted and dimension timber, &c., on the River Ottawa and tributaries: on the St. Maurice river, the Saguenay river, and at Fenelon Falls, and Burleigh Falls on the Trent river.

In the subjoined reports, the superintending engineers of the river works, Messrs. G. P. Brophy, F. X. Lefebvre, and J. C. Taché, give particulars relative to the construction, improvements and repairs carried out under their supervision on government slides, booms, piers, dams, streams, buildings, &c., during the fiscal year, the expenditure incurred for staff, maintenance, improvements, &c., the quantities of the various descriptions of timber that pass through their works, and other information of general interest and utility to lumbermen and the public at large.

REPORT ON THE OTTAWA RIVER WORKS.

(By G. P. Brophy, Suprintending Engineer.)

Ottawa, May 31, 1907.

The Chief Engineer,
Department of Public Works,
Ottawa.

Sir,—As requested by you in your circular of the 25th of April last, I have the honour to submit the following report on the works under my charge, for the fiscal period from July 1, 1906, to March 31, 1907.

The customary examination of the works was made at low water season, and the necessary repairs were carried out during the fall and winter months.

The following is a description of the work done.

REPAIRS AT STATIONS ON OTTAWA RIVER—MAIN STREAM.

North Chaudière or Hull.—At this station, the water in the Ottawa fell so much in the fall months, that it became difficult to pass logs and timber through the upper slide, and steps had to be taken to improve the conditions existing. A number of tiers of old flooring which had been laid from time to time, was removed down to the original floor, and the clear opening was reduced from 12 feet to 7 feet in width, thus giving about the same sectional area, but increased depth, with the same quantity of water available.

Side walls were built about 30 feet in length, on both sides, to confine the water, and iron bars were laid in the bottom of the slide, secured by countersunk-headed spikes. Suitable stop logs were made, and a cross sill, with upright guides, was laid on the solid rock, a little above entrance to slide, so that the water may be readily shut off independent of the bulkhead.

Two extra straps of $\frac{3}{4}$-inch iron were placed on the special stop-log at the upper slide. New caps, braces and splice pieces were placed on the guide booms, and the top planking was renewed.

The floor on the lower slide was patched, and the iron straps were taken up, straightened and re-laid in place.

A supply of timber and iron was purchased for further repairs at this station.

South Chaudière or Ottawa.—In the bottom of the long slide, defective planks were repaired; the apron and bottom chains were adjusted; the scows and boats were repaired and painted, and the boat house was extended.

Before the river opened in the spring, ice was cut from around the guide booms and aprons, to protect them from damage.

Ice and snow were removed from the roofs of the buildings at the government reserve, on Victoria island, and these structures were maintained in a proper state of repair.

TRIBUTARIES OF THE OTTAWA RIVER.

Gatineau river.—At the main boom, near the mouth of the Gatineau river, the top planking of the various booms was repaired, and new caps, pickets and screw bolts were placed in position, while additional braces were set at the feeding gaps. Worn ends of boom sticks were sawn off, and new holes were bored, further back in the solid timber, for the connecting chains.

At the mouth of Pond creek, new gap sticks were provided and the covering of the booms was repaired.

The top of a pier, about 300 feet above the Canadian Pacific Railway bridge, was rebuilt. It is 23 feet square at water line, 19 feet square at top, and 13 feet high above low water marks.

Two sections of cribwork were built, on the south shore of the Gatineau, to protect the bank from erosion. One of these is situated immediately above the station house reserve, and is 250 feet long, 6 to 10 feet wide and 4 to 5 feet high. The other is about 200 feet above the latter section, being 70 feet long and about the same width and height as the former. The bank at the base of these two piers was excavated, to insure a good foundation, and rip-rap was placed on the tops of the cribs and carried up towards the bank, to prevent the shore from being displaced. A quantity of stone was also deposited along the south shore, above these two cribs, between high and low water marks, to preserve the bank, where the current strikes with much force in the springtime.

The roofs of the station house and storehouses were also repaired, and fenders were placed on the corners of the trip pier at upper end of the boom, opposite the reserve.

Madawaska river.—At Arnprior station the bottom of the slide was sheathed with 2-inch plank to prevent leakage when there was a scarcity of water, in the autumn months.

Coulonge river.—At High Falls station, a row of timbers was placed on the crest of the controlling dam, to raise the water at the entrance to slide, to facilitate the passage of logs and timber through the slide.

Petawawa river.—At Second Chute station, the main governing dam, adjoining the west shore, had settled considerably, allowing too much water to escape. Two stringers of 12-inch by 12-inch timber, 35 feet long were placed at the rear of the dam, thus raising the crest to its proper elevation. The face of the dam was sheathed with 6-inch pine 16 feet long, for a width of 10 feet.

McDonald's Station.—In order to reduce the cost of maintenance in the future, and also to enable the lumbermen to pass their logs and timber with greater despatch at this station, it was deemed advisable to abandon the single stick slide, which is 510 feet long and 6½ feet average width, and to construct another short one of greater capacity, in mid-channel. This necessitated considerable blasting in the rapids, but the work done in this direction will be of a permanent character, and of service for all time.

A coffer-dam was built, the water was drawn off as low as possible by removing sheathing at various places on the dams, and an opening was cut in the main governing dam, about its centre. The two entrance piers, each 23 feet long, 12 feet wide and 8 feet high, support the stop-logs, and the space, 19 feet in width, between them, forms the slide, the bottom of which is covered with pine 8 inches in thickness. Immediately below the slide is an apron, 33 feet in length, composed of cribwork covered with 8-inch pine; and on both sides of it are piers of the same length, 10 feet wide and 4½ feet high. The slide is fitted with the usual hoisting apparatus to regulate the flow of water through the slide.

Two glance piers were built to confine the water in the new channel. The one on the north side is 75 feet long, 12 feet wide at base, 8 feet at top, and 8 feet high; while that on the south side is 54 feet long, 8 feet wide at base, 6 feet at top, and 5 feet high.

A support pier 15 feet by 16 feet and 12 feet high, for the main boom was built above the slide entrance, and nine lengths of new boom were provided and secured at the upper end to a ring bolt set in the solid rock.

Owing to the inaccessibility of McDonald's station,—some thirty-two miles from any settlement or railway communication,—the work proved tedious, and much difficulty was experienced in procuring suitable men for this class of work, and also in taking in their supplies in the fall, as the portage road lies in a very mountainous tract of country.

During the summer, other repairs were also made at the different stations, by the deputy slide masters and their staffs, in the intervals which occurred between the passing of the several 'drives.'

In July last the water in the Ottawa and its tributaries commenced to fall rapidly, and towards the latter part of the season, at several of the stations, temporary means had to be resorted to in order to pass the logs through the slides, and some of the late 'drives' had to be abandoned altogether owing to the scarcity of water in the streams.

The following statement shows the number of pieces of the various description of timber that passed through these works and the revenue accrued thereon, for the period covered by this report:—

Square timber	444	pieces.
Sawlogs	4,185,118	"
Boom and dimension timber	74,859	"
Cedars	45,951	"
Railroad ties	360,984	"
Fence posts	99,552	"
Total	4,766,908	"

Also 33,948,99/100 cords of pulpwood.

The revenue accured on the above was, $43,846.90.

STATEMENT showing Expenditure for Repairs and Reconstruction on Ottawa River Works, and Bridges at Ottawa, and Roadway and Bridge Approaches between Ottawa and Hull, for Fiscal Period ended March 31, 1907.

NAMES OF STATIONS.	Province.	Electoral District.	Expenditure. July 1, to Dec. 31, 1906.		Expenditure Jan. 1, to Mar. 31, 1907.		Expenditure July 1, 1906, to Mar. 31, 1907.	
			$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Repairs: Ottawa River Works—								
North Chaudière Station } Ottawa River.	Que,	District of Wright	207 34		753 05		960 39	
South " " } Ottawa River.	Ont.	City of Ottawa	154 19	361 53	210 55	963 60	364 74	1,325 13
Gatineau River } Tributaries of the Ottawa River.	Que.	District of Wright	2,652 13		1,027 15		3,679 28	
Madawaska " } Tributaries of the Ottawa River.	Ont.	South Riding of County of Renfrew	81 97				81 97	
Coulonge " } Tributaries of the Ottawa River.	Que.	County of Pontiac	7 55				7 55	
Petewawa " } Tributaries of the Ottawa River.	Ont.	North Riding of Renfrew and County of Nipissing	3,862 61	6,604 26	435 58	1,462 73	4,298 19	8,066 99
Total for Ottawa River Works								9,392 12
Repairs: Bridges at Ottawa and Roadway and Bridge Approaches between Ottawa and Hull—								
Sappers' Bridge	Ont.	City of Ottawa			69 56		69 56	
Dufferin "	Ont.	" "	231 62				231 62	
Chaudière Slide Bridge	Ont.	" "	663 36		213 52		876 88	
Union Bridge	Ont. & Que.	City of Ottawa and district of Wright	82 05		434 60		516 65	
Hull Slide Bridge	Que.	District of Wright	28 75		36 50		65 25	
Roadway and Bridge Approaches between Ottawa and Hull	Ont. & Que.	City of Ottawa and District of Wright	337 71	1,343 49	560 59	1,314 77	898 30	
Total for Bridges and Approaches							2,658 26	
Dufferin Bridge—Reconstruction	Ont.	City of Ottawa		3,596 91		1,300 50		4,897 41

OTTAWA, May 31, 1907.

JOSEPH KENT,
Accountant.

REPORT ON THE ST. MAURICE RIVER WORKS.

(By F. X. Lefebvre, Superintending Engineer.)

THREE RIVERS, June 1, 1907.

EUGÈNE D. LAFLEUR, Esq.,
Chief Engineer, Department of Public Works,
Ottawa.

SIR,—I have the honour to submit the following report on the works under my charge on the St. Maurice river for the fiscal year ended March 1, 1907.

After the drives were over last fall, the various structures on the St. Maurice river were examined, and a commencement made of the necessary repairs and improvements. The work was continued during the winter, in order that everything would be ready for the opening of navigation of 1907.

Pointe à Trudel.—On the 40th mile of the St. Maurice river 600 feet of spruce booms, 3 feet wide, covered with 3-inch pine deal, were constructed and the necessary chains were supplied. A pier, commenced a few years ago, was finished.

Pointe à Madelèine.—The pier, commenced last year to replace the pier No. 2, was finished.

St. Jacques des Piles.—A new pier was built and the booms put in good condition.

Petites Piles.—3,500 lineal feet of spruce booms, 3 feet wide and covered with 3-inch pine deals, were constructed and the boom chains for them supplied. An old pier was repaired.

Rapide des Hetres.—A pier, commenced two years ago, was finished, and the foundation of a new one started. 600 lineal feet of spruce booms, 3 feet wide, covered with 3-inch pine deal, were constructed and the chains for them supplied.

Pointe à Bernard.—Pier No. 8, commenced last year, was completed.

Shawinigan Slide.—The slide was put in good order.

Shawinigan Lower Bay.—Two old piers were rebuilt, from low water line, and the booms repaired.

Les Gres Falls.—About 500 lineal feet of single round spruce booms and the necessary half-inch chains were supplied.

Mouth of the St. Maurice River.—Four old piers were rebuilt from low water line.

The drives of the fiscal year 1906-7 were very expensive on account of the water being very low in the summer of 1906.

REPORT ON THE SAGUENAY RIVER WORKS.

(By J. C. Taché, Superintending Engineer.)

Saguenay booms are on the Saguenay river, about six miles above Chicoutimi.

In 1904-5, five piers, 45 by 25 at bottom, with an ice-breaker facing the current, were built. These piers are of round logs open-face cribwork, sheathed with 6-inch spruce plank, with boiler-plate in front, and fenders of 10 by 10. Amount expended $18,000.

During the year 1905-6, the following booms were built :—112 pieces of 80 feet long in three pieces of 12 by 12, eight pieces of 40 feet in three pieces, 12 by 12, being all built in British Columbia fir ; also ten booms of 20 and 30 feet in spruce 10 by 10.

Every boom is planked with 3-inch spruce deals; anchors and chains, B.B.B. proof, were also purchased. Amount expended $20,653.42.

During the fiscal year 1906-7, a scow, 60 by 14, was built; three row-boats and six booms of 60 feet were also built in three pieces of spruce 10 by 10, planked with 3-inch spruce deals ; chains and anchors were purchased. The two buildings on the ground of the booms were repaired. Amount expended, $4,514.99.

BRIDGES AND ROADS.

It may be stated that, in the older provinces of the Dominion, the federal government has confined itself, as a rule, to take under its exclusive control and make provisions towards the construction and maintenance of important interprovincial road bridges and bridges required across waterways.

In the sparsely settled districts of the Northwest Territories, the government of Canada has undertaken to provide for the erection and maintenance of ordinary road bridges over large streams; bridges that are urgently needed to afford uninterrupted communication through trails and highways of national importance, which neither the municipalities to be more immediately benefited by the structures, not the territorial authorities most directly concerned could be expected to erect and maintain at their sole expense.

During the last fiscal year works have been executed on the following bridges:—

ONTARIO AND QUEBEC.

Bridges at Ottawa, and Roadway and Bridge Approaches between Ottawa and Hull.

REPAIRS.

Sappers' Bridge.—The top covering of the sidewalk on the north side of this bridge was renewed, the material used being white pine 2 inches in thickness.

Dufferin Bridge.—Preparatory to starting the reconstruction of the roadway of Dufferin bridge, a false floor was built on top of the arch trusses of the eastern span, to guard against debris falling upon the railway tracks which pass underneath the bridge, while the work of removing the old floor was in progress.

Chaudière Slide Bridge.—A section of the sandstone pavement on the bridge over the south Chaudière slide and hydraulic channels, which had been laid on a 'fill' and had settled somewhat, had to be taken up and relaid to the proper grade. The discrepancy was filled with concrete and the blocks were laid in cement mortar and grouted on top. The gratings and waterways were cleared of rubbish, and the roadway was cleaned frequently.

Union Bridge.—The roadway of this bridge was cleaned, and the planking was renewed when worn out.

Hull Slide Bridge.—This bridge is paved with sandstone blocks, and the only expense incurred was in keeping the roadway clean.

Roadway and bridge approaches between Ottawa and Hull.—A 'cave in' occurred on the causeway leading to Hull, owing to the foundation having been washed out. The void was filled with clean stones and the pavement was relaid in sand.

This thoroughfare was cleaned often, and the wheel guards and railings were repaired as required.

During the winter, surplus ice and snow were removed from the roadbeds of the bridges, approaches and sidewalks; and 'pitch holes' in the roadways were filled, to improve their condition. Sand was spread on the sidewalks, when slippery, for the safety of pedestrians who had occasion to use them.

DUFFERIN BRIDGE, OTTAWA—RECONSTRUCTION.

The old floor of this bridge consisted of two layers of pine plank, resting on taper strips laid on top of the iron cross beams, to give the proper crowning to the roadway, and the upper portion was pine blocks, 6 inches high, set on end upon the floor. The blocks were separated by a strip of wood at the bottom, and the space at the top, between the blocks, was filled with a mixture of gravel, sand and tar.

This pavement was satisfactory for a number of years, but of late it had become in a very poor condition, owing to the very heavy traffic to which it was exposed; and moreover, there was a constant danger of the floor being set on fire, by sparks from steamboats and locomotives passing beneath the bridge, the woodwork being of a very inflammable nature, on account of the tar used to preserve the wood.

In the new construction, the danger of fire will be entirely removed, and the sandstone blocks may be expected to wear for an indefinite period.

After the old floor had been removed, steel I-beams 8 inches deep, 18 lbs. per foot, were placed transversely upon the tops of the arch trusses, midway between the old 6-inch beams which are set at 5-feet centres, thus making the new spacing 2½ feet centre to centre.

Steel plates, ⅛-inch thick were rolled to the proper curve, and placed between the beams, the edges resting upon the lower flanges of the beams. These plates were bent so as to give a greater height at the centre of the roadway, forming the proper shape to the roadbed, without increasing the concrete to a greater depth at the centre than at the curb. The average depth of the concrete is six inches, and cinders were used instead of broken stone, to lessen the weight as much as possible.

The sandstone pavement was laid in a thin bed made of cement, sand and crushed cinders, and the joints between the blocks were filled with grouting.

The sidewalks are carried on 6-inch steel I-beams, 13 lbs. to the foot, and these support the curved plates. The walks are to be of granolithic, but as the weather was too cold last fall to do this part of the work, it was deferred until the present time.

Four cut stone caps were set on tops of the pedestals on the piers on both sides of the canal. These are designed to correspond with the other stonework, and add very materially to the general appearance of the bridge.

POND CREEK BRIDGE.

Pond creek is an outlet to Leamy's lake, and flows into the Ottawa river, half a mile above the mouth of the Gatineau river.

In 1894-5, a bridge, 235 feet long over all and 20 feet wide, was built over the creek, at a cost of $3,726.26. The bridge was opened to traffic on May 1, 1895.

The flooring was repaired in 1897-8, at a cost of $210.01. During the fiscal year 1901-2, minor repairs cost $20. In 1902-3, the sum of $1,130.52 was expended on repairs to the stone rip-rap and abutments, and for renewing the whole flooring and supports.

In October, 1906, when some heavy pieces of plant were being removed from the site of completed work at Gatineau Point to warehouse in Hull, some minor repairs had to be made to strengthen the bridge. Three braces were renewed at a cost of $18, charged to Gatineau Point appropriation.

MANITOBA.

COLONIZATION ROAD, WHITEMOUTH, MANITOBA.

Road construction and improvement in the vicinity of Whitemouth, Manitoba, was carried on during the months of October and November, 1906.

Whitemouth Municipality, Ward 1.—On the west side of the Whitemouth river, from the S.W. ¼ section 18, township 11, range 12, following the trail along the river,

into section 32, township 10, range 12, at about the proposed station on the Transcontinental Railway.

The work consisted of the clearing and grubbing of a road 50 feet wide, for a distance of about 2½ miles, also the grading and ditching of the greater portion of this distance. Culverts were put in to carry off the drainage water. This district is well settled and the road will afford easy communication to Whitemouth station, Canadian Pacific railway,—and also to the proposed station on the Transcontinental Railway.

Whitemouth Municipality, Ward 2.—On the east side of the Whitemouth river, on the township line running north and south between sections 29 and 30, township 11, range 12, and from the dividing line running east and west, going south for a distance of 2½ miles. A roadway was cleared for a width of 20 feet and made suitable for traffic. This road permits of access for about twenty settlers to Whitemouth, over the bridge recently constructed over the Whitemouth river.

Whitemouth Municipality, Ward 4.—On the township line between townships 12 and 13, running north between sections 3 and 4, range 11, for a distaene of about 4 miles.

The road was widened and cleared to a width of 50 feet, 1¼ miles of low land was graded and ditched. Sound box culverts were put in and two pipe culverts were constructed to pass two creeks. A road 20 feet wide was also cleared for a distance of ¾ mile, running east between sections 10 and 15, thence north for a distance of half a mile.

On this latter road ditching was done for a distance of about 3,500 feet. The road improvement made in Ward 4 will be a great convenience to a large German settlement and will permit of easy access to Whitemouth station on the Canadian Pacific Railway.

Work on the above colonization roads commenced on October 10, and was finished on November 19, 1906. The total amount of expenditure was $2,491.

SHELLMOUTH HIGHWAY BRIDGE.

Proposed highway bridge over the Assiniboine river at Shellmouth, Manitoba, distant about eighteen miles from Russell, Man., a point on the Canadian Pacific Railway.

The contract for the substructure of this bridge was awarded on May 9, 1906, to the J. McDiarmid Co., of Winnipeg. The plans and specifications called for the construction of two piers and two abutments of concrete, including the excavation of the necessary material, grading of slopes and riprap protection of the piers and abutments.

The contractors delayed making a start, in order to take advantage of low stage of water which would facilitate the unwatering of the foundations. Actual work was commenced on August 15, 1906, and the substructure was completed on December 24, 1906. The concrete consisted of 1 part cement, 3 parts sand and 5 parts gravel. The cement used was Atlas Portland cement, and samples were taken from every tenth barrel and tests made at the cement laboratory, at St. Andrews, Manitoba.

The results of all cement tests were found entirely satisfactory. It was found necessary to increase the quantity of concrete shown on the contract plan, owing to the line of hard material for foundations being actually lower than shown on contract plan.

Piling was also found necessary under the west abutment.

Total expenditure in 1906-7, $20,164.08.

NORTHWEST TERRITORIES.

BATTLEFORD BRIDGE (OVER BATTLE RIVER).

The work of repairing the Battleford bridge over the Battle river was proceeded with, and an expenditure of $1,767.78 was incurred in doing so. The whole of the bridge, including approaches, required new flooring. The north approach, which was composed of a succession of trestle bents, was in a dilapidated, unsafe condition. Owing to the fact that the amount of money available was limited, it was thought advisable to confine the work of repairs to the reconstruction of the latter approach before undertaking the main bridge floor. The primary intention seemed to have been, when the main part of the bridge was rebuilt, to grade this approach to the north abutment, so we carried out that plan and graded it, using scrapers and wagons. The floor and stringers were removed and the material dumped into the trestle, mostly from up above, though some of the material placed in the bottom was put in with scrapers from below.

For want of the required funds to renew the main bridge flooring, instructions were given to keep the dangerous places patched up until such time as funds became available to renew it. Apart from the floor alluded to, this bridge is in a good condition and answers a good purpose, particularly since the Grand Trunk Pacific Railway has started building south of this place.

Signs were also printed and put up, requesting the public to drive over the bridge no faster than a walk.

EDMONTON BRIDGE.

During the last fiscal year the sum of $2,946.28 was expended in reflooring this bridge; the old floor was removed and a new floor of the best British Columbia fir laid down.

The railway company has improved its tracks and approach to the bridge, while the municipalities of Edmonton and Strathcona have also commenced improving their respective portions of the approaches.

LANGEVIN BRIDGE (AT CALGARY).

During the fiscal year ended March 31, 1907, the sum of $93.85 was expended for minor repairs to this bridge.

CEMENT LABORATORY.

E. D. Lafleur, Esq.,
Chief Engineer, Public Works Department.

Sir,—I have the honour to inclose herewith the annual report of the Cement Laboratory, Public Works Department, for the year ended March 31, 1907.

I have the honour to be, sir,

Yours obediently,

(Sgd.) GEO. E. PERLEY,
Engineer in charge.

Since June 30, 1906, all samples of cement and other building material submitted to this branch of the department have been thoroughly tested and reported upon.

Chief among these being: Three Rivers new wharf, Rivière Ouelle wharf, Highway bridge at Shellmouth, Man., wharf at Masson, retaining wall at Gatineau Point, Que., breakwater at Goderich, Ont., breakwater at Cow bay, Port Morien, and wharf at Wiarton, Ont.

In the past year there were eight hundred and thirty-five samples submitted for test purposes, which number shows an increase of 384 samples, or 85·1 per cent over the same period last year.

Of the 835 samples received, 815 were submitted by engineers of this department, nine by the Railways and Canals department, four by the Transcontinental Railway, two by the Chief Architect of this department, two by outside engineers, two by cement companies and 1 by a contractor.

Of the total number received:—

402 were International Portland cement.
336 were Star Portland cement.
45 were White Bros. Portland cement.
18 were Hercules Portland cement.
10 were Atlas (American) Portland cement.
6 were Belleville Portland cement.
6 were Unmarked Portland cement.
4 were Rampart Slag cement.
1 was Johnston Portland cement.
1 was Artillery Portland cement.
1 was Samson Portland cement.
1 was sample of concrete block.
5 were samples of sand and gravel.

Some time ago we started to install a complete electric storage battery plant, which plant, when completed, added to the rest of our electrical installation, will put our laboratory on an equal footing with any laboratory in America.

PART IV.—APPENDIX 'A.'

INTERIM REPORT

ON THE

GEORGIAN BAY SHIP CANAL SURVEY

BY

Arthur St. Laurent, C.E.

Department of Public Works,
Georgian Bay Canal Survey,
Ottawa, April 2, 1907.

Sir,—I have the honour to submit herewith my annual report on the progress of the work in regard to the Georgian Bay Ship Canal Survey for the nine months constituting the fiscal year 1906-7, ending March 31, 1907.

I have the honour to be, sir,
Your obedient servant,
A. ST. LAURENT,
Asst. Chief Engineer.

Eugène D. Lafleur, Esq.,
Chief Engineer,
Public Works Department.

GEORGIAN BAY SHIP CANAL SURVEY.

During the nine months constituting the past fiscal year the work done in connection with the survey of the proposed deep waterway from the Georgian bay to tidewater, via the French and Ottawa rivers has been mostly office work as all the regular surveying parties operating on the different sections of the route were discharged in the previous year, their field duties having been completed.

As the office work progressed, however, in laying down the lines of the routes selected and in locating the different structures, it was necessary from time to time to detach a few men to get supplementary information at critical points, where the required data was not complete.

Several supplementary metre measurements of the flow of the Ottawa and French rivers were also made at different stages of the water in order to check previous measurements and to obtain a closer determination of the discharge curves at all stages. These measurements will be continued during the present season.

A boring party was continued at work, investigating the different lock and dam sites selected. This involved considerable trial work, as in many cases, the locations which seemed to be desirable for structures were found to be unfavourable on account of the poor character of the foundations and new sites had to be tested and the canal line changed accordingly.

The precise levelling which comprised a main line from Rouse's Point, N.Y., to North Bay and a net of check lines at both ends was satisfactorily completed. Results were computed and tabulated for future reference. In connection with this precise levelling, automatic recording gauge stations were maintained at Toronto on Lake Ontario, and at Collingwood and French river, on Lake Huron, to collect the data required for water level transfers, from similar United States' stations of known elevation above mean sea level, as determined by the United States geodetic and lake surveys. All the different sections of the survey have been connected with the precise level line and all elevations reduced to mean sea level.

Some preliminary explorations have also been made of the head-waters of the Ottawa river and of some of the large tributaries, with a view of a possible storage

system and control of flood waters, which would be desirable not only in regard to the canalization of the Ottawa river for large navigation, but also in connection with the promotion of the industries depending on the permanency of water-powers.

These investigations are being continued, but for the present it is not intended to do anything more than preliminary work, and ascertain whether or not the control of the flood waters is possible by means of a system of storage reservoirs, judiciously selected. The detailed surveys required in this connection would be quite extensive and the object of the present investigation will be attained by preliminary explorations. When the construction of the canal is decided, then detailed surveys for the selection of storage areas will be required.

A small party has to be sent out as soon as the season is favourable to establish the geographical position of a few points on the canal route, to place permanent stations where structures have been located and to connect some of the township lines with the canal survey lines.

In the office, a force of draughtsmen has been employed completing the field plans, and making copies rearranged in suitable sections.

On these plans are recorded, all elevations, contours, bench marks, the centre line of proposed routes, location of structures, such as locks, dams, regulating works, &c., ranges of lights, cross-sections of the canal, diagrams illustrating borings, water records, flooded areas, grade contours, mileage, &c., &c. A profile is also being prepared showing the bottom or grade line of the canal, the present water surface and the proposed raised water level, the location of locks and the profile and nature of the material to be excavated.

Land divisions on both sides of the route with lot numbers have been compiled, as far as available, and also plans of adjoining cities, towns and villages.

The working plans, which are made to a scale of 400 feet to the inch, are subdivided as follows:—

No. 1.—Montreal to St. Anne.
No. 1A.—Bout de L'Isle to Oka (alternative route).
No. 2.—St. Anne to Hawkesbury.
No. 3.—Hawkesbury to Ottawa.
No. 4.—Ottawa to Chenaux Rapids.
No. 5.—Chenaux Rapids to Pembroke.
No. 5A.—Sable Rapids to Fort William (alternative route).
No. 6.—Pembroke to Des Joachims.
No. 7.—Des Joachims to Mattawa.
No. 8.—Mattawa to head of French river on Lake Nipissing.
No. 9.—Head of French river to Georgian bay.

These plans are well advanced though there is yet considerable work to do in relation to the project proper.

Enlarged plans of lock and dam sites are also being prepared and the following general maps have been commenced:—

1st. A reduction of the large detailed plans to a scale of 4,000 feet to the inch, showing the route on a continuous sheet with complete profile of the land and water surfaces and different reaches proposed.

Though it is impossible on this reduced plan to show all the topography and details, it will show the project in a general way and give a general idea of the works required and the location of the structures for the benefit of those who have not the time to study the more detailed plans.

2nd. A map to a scale of six miles to the inch plotted on a projection showing the general topography of the country through which the proposed waterway is located, together with a general profile of the centre line. This map will serve as an index map to the large scale plans.

3rd. A map showing the proposed Ottawa river waterway, together with the other principal water and railway transportation routes, from the head of the Great Lakes, via Montreal and New York to Liverpool, with several tables of comparative distances between main shipping points via different routes.

Apart from these, various plans in regard to the hydraulic investigations and other special matters, relating to the project, have been commenced.

The taking out of quantities required to determine a close approximate cost of the canal is much advanced, and is being done with the utmost care by trusted computers, whose work is carefully checked. In order that the estimated cost may be as reliable and as close as possible, all quantities referring to excavations, embankments, locks, dams and controlling works, flooded lands, &c., are itemized and worked out in detail, and very few uncertain items will be lumped. In applying prices for the estimated cost, in every case, local conditions are considered, and difficulties of construction to be met with are well matured.

A good deal of time and attention has been devoted to determine the type of dam and controlling works most suitable for the Ottawa river. As these works are necessarily of a very extensive character, the cost will vary considerably according to the types selected, and it is of the greatest importance that economical designs be adopted which will at the same time meet all requirements. Various types are being studied and a decision will be reached shortly in this matter as well as in many other questions which are now under investigation. It will then be possible to complete a reliable estimate of cost for the whole work, which covers 440 miles of canalization from the Georgian bay to Montreal.

As a complete report with plans and estimate of cost will be given in a few months, it is unnecessary in this general review of the work done during the past fiscal year, to go into details.

The proposed work is one of great magnitude and presents many engineering difficulties which require long and serious consideration. These difficulties can be overcome, but in deciding on the general lines of the project and the character of the structures and methods of construction, due consideration must be given to economy in design and great care exercised in not interfering too much with established industries or vested interests. At the same time, it is of the greatest importance that the canal be designed to meet the object in view, and assure safe and rapid passage to large boats.

It may be well here to state that the amount of engineering work involved is so large that the officers in charge of the survey have had to devote their whole time to the consideration of the technical part of the project only, and it will be possible for them to treat only lightly, in their report, on the commercial possibilities of the waterway.

An investigation in this connection by a mixed body of experienced engineers and business men would seem to be of the greatest importance.

The following are matters which it is respectfully suggested may come properly within the scope of a special commission regarding the industrial, commercial and national aspect of the proposed undertaking:—

1st.—A study of the transportation problem in relation to the proposed waterway; to what extent can it help developing the immense resources of the country?

2nd.—The advantages of a large waterway, from the lakes to the seaboard, open to all carriers, and its influence in regulating the rate of transport, especially upon cheaper commodities which the country produces.

3rd.—The competition of the waterway with the railways; probable beneficial effect on railways, by creating new industries, on account of the cheap transportation of low grade freight that cannot be handled profitably by rail, causing an expansion in industries, adding to the population, and the demand for higher class of freight seeking transportation by rail.

4th.—The volume of traffic available on account of the natural advantages of the waterway, being the shortest and only route offering lake navigation from the head of the Great Lakes to the seaboard.

5th.—Traffic of the Great Lakes; how it reaches the seaboard. The percentage of Canadian traffic handled through United States ports, and causes therefor.

6th.—Lake transportation; rates that obtain, lake and rail as aginst all rail, also a comparison with an all water route.

7th.—A comparison of the volume of traffic that may be handled by water, as against the rail routes, within the same period. Economic advantages of the waterway.

8th.—The position of the Northwest; Fort William being the objective point of all lines running through the wheat belt. How will the situation at the head of the lakes be met? Would not an all water route from Fort William to the seaboard be the natural complement of the Lake and rail routes?

9th.—The position of the existing and projected Gulf lines via Galveston; what their influence may be regarding diversion of traffic from the lakes and St. Lawrence route.

10th. The conditions that exist at the Canadian and United States ports on the Atlantic seaboard.

11th.—Interprovincial trade. The strengthening of trade between the provinces. The Northwest to supply Ontario, Quebec and the maritime provinces with wheat at the cheapest cost of transportation. Ontario and Quebec to supply in return, the product of their manufacturers, whilst it will perhaps be possible for Nova Scotia to supply coal to Ontario at a cheaper rate than it now costs to bring it from the United States, effecting a great saving to the country.

12th.—The iron industry and other mineral resources; the deep waterway as a factor in their development.

13th.—Pulp industry and the possibilities of development.

14th.—The tendency to manufacture at the base of supply; the possibilities along the route of the waterway, where raw material, which cannot be transported by rail at a low rate, is available. The easy development of large water-powers at dams, for manufacturing purposes.

15th.—Comparative cost of transportation per ton per mile, rail, lake and rail, and all water.

16th.—New territory opened in the Northwest, and the requirements to move the grain crop ten years hence to open market.

17th.—Storage at the head of the lakes and the seaboard; extent of terminals required.

18th.—Markets, general statistics; synopsis of history of deep canals; their trade development.

Before concluding, I wish to state that great credit is due to the District Engineers and all the staff under my direction for their devotion to duty and extreme good will, and I desire to express to them my most sincere thanks.

Respectfully submitted,

A. S. LAURENT,

Ass't Chief Engineer.

PART V

REPORT ON GOVERNMENT TELEGRAPH LINES

FOR THE

NINE MONTHS ENDED MARCH 31, 1907

DEPARTMENT OF PUBLIC WORKS,
OFFICE OF THE GENERAL SUPERINTENDENT,
OTTAWA, ONT., October 16, 1907.

F. GELINAS, Esq.,
Secretary, Department of Public Works.

SIR,—I beg to submit herewith my report on the Government Telegraph Service for the nine months ended March 31, 1907.

This report, as usual, is prefaced by a list to the present date of the land lines and cables in operation; with data of lengths, year of construction, number of offices at present established, and an estimate of the traffic handled in each instance.

The usual tabular statements giving list of offices, operating staff, &c., in the several districts are appended to the report; likewise the tariff sheets, showing the rates charged for messages on the several lines.

I have the honour to be, sir,
Your obedient servant,
D. H. KEELEY,
General Superintendent.

THE GOVERNMENT TELEGRAPH SERVICE.

DOMINION OF CANADA.

HEAD OFFICE: DEPARTMENT OF PUBLIC WORKS, OTTAWA.

(October 1, 1907.)

EXECUTIVE.

The Hon. William Pugsley, Minister of Public Works.
A. Gobeil, Esq., I.S.O., Deputy Minister of Public Works.

STAFF AT HEADQUARTERS.

D. H. Keeley, general superintendent.
M. W. Crean, technical assistant.
J. P. Demartigny, accountant, telegraph branch.
Miss A. Hardcastle, stenographer.

GENERAL INSPECTORS.

A. B. McDonald, Meat Cove, Cape Breton, lines in Nova Scotia and New Brunswick.
J. S. Macdonald, Kamloops, B.C., lines in Northwest and south British Columbia.
J. E. Gobeil, lines in Yukon division.

SUPERINTENDENCIES.

Edwin Pope, Quebec, dist. supt., North Shore and G.N.W. traffic.
J. C. Taché, dist. supt., Chicoutimi district and north shore to Bersimis.
E. H. Tetu, Long Point of Mingan, dist. supt., North Shore, East Bersimis.
P. Pouliot, dist. supt., Quarantine line, &c., to Grosse Isle.
A. Malouin, dist. supt., West Point, Anticosti Island.
A. Le Bourdais, Grindstone, dist. supt., Magdalen Islands.
D. C. Dawson, St. John, N.B., dist. supt., Cape Breton system.
Mrs. C. C. Seely, Grand Manan, N.B., dist. supt., Bay of Fundy system.
J. McR. Selkirk, Leamington, Ont., dist. supt., Pelee Island system.
Robt. C. Macdonald, Qu'Appelle, dist. supt., Northwest Territories.
Wm. Henderson, Victoria, dist. supt., British Columbia, south.
C. S. Stevens, Kamloops, B.C., supt., Penticton line.
J. T. Phelan, Vancouver, B.C., acting supt., Yukon system.
H. Gilchen, Whitehorse, Y.T., acting dist. supt., Atlin-Boundary.

SESSIONAL PAPER No. 19

GOVERNMENT TELEGRAPH SERVICE.

Location of Lines.	Points connected.	Year.	Length of Lines.			Number of Offices.	Messages Sent.
			Land Lines.	Cables.	Total.		
			Miles.	Kt's.			
Newfoundland..	Port au Basque—Cape Ray	1883	14	.....	14	2	
Nova Scotia....	North Sydney—Meat Cove (with loops)..	1880-02	167¼	.....	168¼	18	9,776
" ...	Across Bras d'Or channel.....	1880	.....	½			
"	" St. Ann's Harbour.....	1887	....	¼			
"	" Ingonish Harbour.....	1887	.....	¼			
"	Big Bras d'Or—Kempt Head.....	1904	20	. .	20	3	
" .. .	Meat Cove—St. Paul's Island.	1890	.....	20	23	1	
"	On St. Paul's Island.....	1890	3	...		9	
" ...	Mabou—Meat Cove.....	1887-00	109	.....	109		
"	Barrington—Cape Sable....	1883	16	.....		Leased.	
"	Across Bear Point Channel..... ..	1883	.. ..	1½	17¾		
"	" Lt. House Channel.....	1883	.....	¼			
"	Mabou—Port Hawkesbury..... . .	1903	41¾	.....	73¾		
"	Port Hawkesbury—St. Peters	1903	32	.....			
"	St. Peters—Main-à-Dieu...	1904	81¼	. .		16	
" .. .	Main-à-Dieu—Scatarie	1902	.....	1¾	128¾		
" . ..	On Scatarie Island	1904	7¼	... ..			
"	Gabarous—North Sydney.....	1904	35½	....			
"	Little Bras d'Or—Kempt Head.....	1905	36	...	36	13	
"	North Sydney—Eskasoni.	1905	37½	....	37½		
New Brunswick.	Chatham—Escuminac.....	1885	42	.....	42	6	752
	Bay of Fundy System:						
"	Eastport—Campobello.....	1880	.....	1¾			
"	On mainland Eastport.....	1880	½	.....			
"	On Campobello Island.....	1880	7½	..			
"	Campobello-Grand Manan	1880	....	7¼	44¼	10	2,468
"	On Grand Manan Island.....	1880	25¼	... .			
"	Grand Manan—Cheney's Island..... .	1890	....	½			
"	On Cheney's Island.	1890	¾	....			
" ..	Cheney's Island—Whitehead Island... .	1890	.....	¾			
"	Partridge Island—Fort Dufferin.....	1900	.....	¾	¾		
Quebec.....	Bay St. Paul—Chicoutimi....	1881-04	98	.. ...	98	6	
"	St. Alexis- St. Catherines Bay.....	1904	78	.....	78	5	
"	Murray Bay—St. Agnes..	1904	14½	.....	14½	2	
"	Bay St. Paul—Petite River..	1904	13	...	13	1	
"	Chicoutimi—St. Charles	1903	37	.....			
"	St. Anne—Lac Claire	1903	15	....	61	10	
"	St. Anne— St. Fulgence..	1903	9	.....			
"	St. Fulgence—Sacré Coeur	1905	57½	.....	57½	4	
"	Murray Bay-St.Catherines Bay (2nd wire)	1904	44¾	.....	44¾	....	
"	St. Alexis—Chicoutimi (2nd wire).... ..	1905	14½	.....	14½	.....	
	North Shore Line:						15,268
"	Murray Bay—Chateau Bay...	1881-01	1,028½	.. .			
"	Across Saguenay River.....	1883	.....	1¼			
"	Bersimis to Manicouagan.....	1883	.....	12	1090	66	
"	Manicouagan to Godbout.....	1883	.....	26			
"	Chateau Bay—Belle Isle....	1901	... .	22¼			
. . ..	Bersimis—Godbout (alternative line)....	1904-05	80	....	80		
	Quarantine System:						
"	Quebec—L'Ange Gardien.	1885	13	...			
"	L'Ange Gardien—Orleans Island.....	1885	. ...	¾			
"	On Orleans Island..... ...	1885	29¼	.....			1,888
"	Orleans Island—Isle Réaux.....	1889	.....	2	52¾	8	
"	On Isle Réaux	1889	2½	... ..			
"	Isle Réaux—Grosse-Isle.....	1889	.. .	2			
"	On Grosse Isle (all told).....	1885-94	3¼	.....			
"	St. Jean—St. Famille (loop)	1904	5½	. .	5½	1	
"	St François—Baie St. Paul.....	1906	.....	30			
"	Crane Island to Montmagny	1905	.....	3½			
	Carried forward.....	.....	2,222¾	135¼	2,324¼	181	30,152

GOVERNMENT TELEGRAPH SERVICE—*Concluded.*

Location of Lines.	Points connected.	Year.	Length of Lines.			Number of Offices.	Messages Sent.
			Land Lines.	Cables.	*Total.		
			Miles.	Kt's.			
	Brought forward		2222¾	135¼	2324¼	181	39,152
	Anticosti System:						
Quebec	Gaspé—L'Anse à Fougère	1881	28		316½	9	788
"	L'Anse à Fougère—Anticosti	1881		44¼			
"	On Anticosti Island	1881-90	223¾				
"	Anticosti—Long Point, Mingan	1890		21			
	Magdalen Island System:						
"	Meat Cove, C.B.—Magdalen Islands	1880		55	251	13	2,201
"	On Magdalen Islands	1881-02	83½	½			
"	Grosse Isle—Bryon Island	1902		11			
"	Bryon Island—Anticosti	1902		93			
"	On Bryon Island (Loop)	1903	1				
"	House Harbour—Pointe Basse (Loop)	1902	4				
"	Pointe Basse—South Beach (Loop)	1905	3				
	Pelee Island System:						
Ontario	Leamington—Point Pelee	1889	12		42½	10	1,217
.	Leamington Dock—Pelee Island	1901		17			
.	On Pelee Island	1889-00	13½				
North-west	Qu'Appelle—Edmonton	1883	625		625	16	17,782
"	Moosejaw—Wood Mountain	1885	90½		90½	2	
"	Wood Mountain—Willow Bunch	1904	38		38	5	
"	Edmonton—Indian Ag. & Stoney Plain	1904	24		24		
"	Edmonton—Athabaska Ldg	1904	98		98		
"	Duck Lake—Batoche	1902	9		12½	3	
"	Duck Lake—Indian Agency	1902	3½				
"	Edmonton—St. Albert	1887	9		36	3	
"	St. Albert—Qui Barre and Alexandria	1902	27				
"	Lloydminster (loop) near Pitt	1904	22		22	1	
"	Victoria—Andrew and Whitford	1904-05	11½		11½	2	
"	Qu'Appelle—Lipton (Loop)	1906	11		11	1	
British Columbia	Victoria—Cape Beale	1891	118		118	6	1,602
"	Nanaimo—Comox	1893	81		81	10	9,438
"	Parksville—Alberni	1895	29½		86½	2	
"	Alberni—Cape Beale	1899	57				
"	Alberni—Clayoquot	1902	96¾		96¾	9	913
"	Kamloops—Lower Nicola	1899	67		67	32	1,650
"	Lower Nicola—Penticton	1905	168		168		4,500
"	Vernon—Kilowna	1905	35		35		750
"	Kilowna—Penticton	1906	45	1½	46½		
"	Golden—Windermere	1901-02	92		92	4	1,566
"	Duncan Sta.—Salt Spring Isl. & Extens.	1902-04	24	¾	24¾	5	372
Yukon	Ashcroft—Dawson and Boundary	1899-01	1845		2,252½	68	31,856
"	Hazelton—Port Simpson and Aberdeen	1901-02	202½				
"	Tagish—Cariboo Crossing	1901	18				
"	150 mile Sta.—Quesnelle Forks	1902	64				
"	Ashcroft—Lillooet	1896	62				
"	Quesnelle—Barkerville	1887	61				
"	Ashcroft—Quesnelle (local wire)	1878-87	215		215		
	Total		6829¼	380½	7,175	382	104,187

* For convenience in totalling, the knots of cable are regarded as statute miles.

REPORT ON THE GOVERNMENT TELEGRAPH SERVICE, 1906-7.

EXPLANATORY NOTES.

The tabular statement prefacing this report shows the total mileage, &c., of the telegraph lines operated by the government. Lines that have been subsidized or constructed and transferred by the government for operation by private companies are not included in this list.

The matter in the following pages comprises a statement of specific actions taken in the course of the year; and as a new departure, the particulars are given in separate reports hereto subjoined, that have been obtained, where practicable, from the district superintendents, and will be found indicated under the several division headings. In any case where no particular reference is made to a line found in the above-mentioned list, the understanding intended to be conveyed is that the line has been satisfactorily operated throughout the year, without any change of conditions since last made mention of in the annual reports.

NEWFOUNDLAND.

The line from Port au Basque to Cape Ray continued to be operated as heretofore, under an arrangement with the Anglo-American Telegraph Company.

MARITIME PROVINCES.

Cape Breton.—Construction of new lines.—The projected extensions mentioned in last year's report were carried to completion early in 1906. The one from Little Bras d'Or to Kempt Head, on the south side of Boularderie comprises 31 miles of pole line and 36 miles of wire, including loops for office connections; and the one to Eskasoni comprises 31¼ miles of pole line and 37½ miles of wire, including loops for office connections and a stretch of 6 miles along the previously existing line between Balls Creek and North Sydney. The following offices were opened for business at: Little Bras d'Or, East Bay, Castle Bay, North Side East Bay, Alder Point, Hillside, South Side Boularderie, Point Clear, Groves Point, Boularderie West, Little Bras d'Or Bridge and Eskasoni.

To relieve the pressure on the Meat Cove wire, a new wire was strung from North Sydney to Big Bras d'Or, with a loop to Alder Point and crossing Little Bras d'Or with 400 feet of cable; an arrangement which gives entire satisfaction.

OFFICES GENERALLY.

An office was opened at Laframboise Intervale on September 13, 1906, with John D. Morrison as agent, on commission of 25 per cent government line tolls, guaranteed at the rate of $50 per annum. Also one at Breton Cove, in charge of D. B. McLeod, on commission of 25 per cent.

The office at Strathlorne was closed on January 5, the business being insufficient to justify its maintenance.

Repoling and repairs to line.—The repoling of the line between Mabou and Cheticamp was undertaken by General Repairer McLennan, and completed before winter set in. 180 poles were placed between Mabou and Strathlorne, 300 between Strathlorne and S.W. Margaree, and 180 between Grand Etang and the Barren.

The line between Gabarous and North Sydney was overhauled and put in good repair.

Maintenance and operation of the several lines in Cape Breton will be found dealt with in the report (1) from the superintendent, Mr. D. C. Dawson, hereto annexed.

Scatari Island Cable.—Interrupted since November 3, 1904, as mentioned in last year's report. Recently restored in course of repair ships operations. See cable ship *Tyrian.*

St. Paul's Island Cable.—Interrupted since November 14, 1904, as mentioned in last year's report. Recently restored in course of repair ship's operations. See cable ship *Tyrian.*

Magdalen Islands.—Special winter tariff.—With a view to rendering the existing facilities for communication with the mainland as useful as possible during the season of suspension of the mail service, a special rate of ½ cent per word was established the winter before last for messages between the Magdalen Islands and Meat Cove, where connection is made with mainland system of telegraphs at the regular tariff, or the mail is reached for the interchange of letters. It is proposed to continue the same arrangement yearly in the interests of this isolated community.

Meat Cove-Magdalen Islands Cable.—This important connection became interrupted on June 1, 1906; the ss. *Tyrian* was shortly afterwards in readiness for the season's operations, and her attention was, as early as practicable, directed to this section. The repair was made and communication restored on July 26.

Bryon Island Cables.—As mentioned in last year's report, the stretch between Bryon Island and Anticosti became interrupted on December 11, 1904, and the one between Bryon Island and the Magdalen Islands on February 11, 1905. In both cases so far as could be locally determined, the trouble was in deep water, necessitating the services of the ss. *Tyrian,* but it was not found possible to put the ship at work there before the season was too far advanced to make an attempt at repair practicable. Meanwhile the expediency of discontinuing the use of the long Bryon-Anticosti section was decided upon in the department; and instead of repairing that cable a considerable portion of it was picked up from the Bryon Island end for use elsewhere, and the remainder, extending to Heath Point, Anticosti, left undisturbed until there may be occasion for its recovery. The other section, Bryon-Grosse Isle, Magdalens, was repaired by the *Tyrian* on July 28, 1906.

Anticosti Island.—See report (2) from District Superintendent A. Malouin, hereto annexed.

Anticosti Cables.—The South West Point-Gaspé cable, interrupted since November 20, 1905, was picked up and repaired on August 8, 1906, and the Long Point-Anticosti cable, which developed a leak on August 16, was picked up on October 14, 1906, and has since worked satisfactorily.

BAY OF FUNDY.

Grand Manan-Campobello Cable.—This cable which was interrupted on February 21, was repaired by the cable ship staff on May 25, 1907.

Local Telephone Company.—For the accommodation of the local telephone company operating on Grand Manan, a permit has been given by the department for the stringing of their wire, subject to the usual conditions, on the poles of the telegraph line throughout the length of the island.

NORTH SHORE AND CHICOUTIMI SYSTEM.

Under the arrangements put in operation, as stated in last year's report, the several lines comprising this system have been rendering good service. Some further extensions have been made in the Chicoutimi district which will be found fully dealt with

in the accompanying report (4) from the district superintendent, Mr. J. C. Taché, resident engineer at Chicoutimi.

Joint tariff with G. N. W. Tel. Co.—Since September 1, 1905, the charge for messages between Quebec and all points on the government lines west of, but not including Bersimis, has been 25 cents, with 2 cents each for additional words over ten, evenly divided between the company and the government. The earlier rates applied to Bersimis, and all offices further down on the north shore continue unchanged, viz.: the local government line rate plus 15 and 1 for business exchanged with Quebec; or plus the full regular rate of the G. N. W. Tel. Co. beyond Quebec.

Belle Isle Cable.—This cable, owing to the establishment of regular wireless telegraph service by the Marconi Company for the Department of Marine and Fisheries, has not yet been taken in hand for repair.

Changes and Appointments.—L. N. Caron, inspector from Point des Monts to Thunder River, died on October 29, 1906, and was replaced by Frs. Gallienne, of Seven Islands, at a salary of $45 per month.

Mrs. A. Lausier, for some years agent at Bersimis, died on February 8, and was succeeded by Mr. A. Maloney, of Long Point, the latter being replaced at Long Point by Mr. A. Fournier.

QUARANTINE SYSTEM.

The Marconi stations established on the Citadel and at Grosse Isle as an alternative in case of interruption to our cable system, are still in operation, and continue to give satisfactory service.

On September 15, 1906, a cable was laid from St. François, Island of Orleans, to Baie St. Paul (distance 30 knots), with the view of a through connection to Quebec without having to lease a wire.

Repairs to Crane Island cable were completed September 29, 1906.

A detailed report (5) from Mr. P. Pouliot, district superintendent, is hereto appended.

ONTARIO.

Pelee Island Line.—The Pelee Island cable became interrupted on September 29, and was restored on October 15, 1906. It was again interrupted on June 3, and put in repair on June 20, 1907. A separate report (6) covering the particulars of operations, &c., from the district superintendent, Mr. J. McR. Selkirk, will be found hereto annexed.

NORTHWEST LINES.—BRITISH COLUMBIA AND YUKON.

The separate reports (7-11) presented by the respective district superintendents, included in the appendices hereto, will be found to convey more fully than the forms of synopsis heretofore observed, an account of what has been done in those several divisions of the service in the course of the past year. The whole affords a very satisfactory showing.

TELEGRAPH SERVICE GENERALLY.

Cable Ship 'Tyrian.'—The repair ship was got into service early in the season, with Captain T. O'Leary in command, and the staff officers and crew unchanged from last year as detailed in the last annual report. The ship had a busy and successful season, as is shown by the statement submitted elsewhere. Mr. A. B. McDonald, now general inspector of the lines in the maritime provinces, with headquarters at North Sydney, C.B., N.S., ably acted in the capacity of electrician in connection with the ship's operations throughout the year.

Headquarters Staff.—The position of technical assistant rendered vacant by the death of Mr. J. A. Parr was filled in November, 1906, by the appointment of Mr. M. W. Crean, late inspector of North Shore lines.

Telegraph Systems of the Dominion.—As a matter of general interest, pursuant to the statement submitted last year, the latest figures to hand showing the extent of telegraph lines in operation in the Dominion are given hereunder:—

Canada.	Length of lines in Miles.			Lengths of Conductors in Miles.			Number of offices.
	Aerial.	Underground.	Total.	Aerial.	Underground.	Total.	
Great North Western Telegraph Co	11,775	.....	11,775	48,652	.....	48,652	1,360
Canadian Pacific Telegraph	10,292	2	10,294	50,952	57	51,009	1,150
Western Union Telegraph Co	2,610	28	2,638	9,805	44	9,849	219
Government Telegraph Service	6,829	.....	6,829	6,829	.....	6,829	382

REVENUE AND EXPENDITURE.

The revenue and expenditure for each of the government lines in the several districts hereinbefore mentioned are given in the following table:—

1906-07.	Expenditure.	Revenue.	Remarks.
	$ cts.	$ cts.	
Lower St. Lawrence and Maritime Provinces:—			
Anticosti lines	4,073 74	827 97	
Bay of Fundy	1,569 29	695 16	
Gaspe Local	.....	26 36	
Escuminac	216 00	172 97	
Magdalen Islands	1,975 19	1,062 98	
Father Point Agency	500 00		
Cape Breton lines	13,576 34	2,066 95	
North Shore (E.B.)	17,072 45	2,464 73	
" (W.B.)	12,466 00	1,877 35	
Quarantine system	2,948 76	391 14	
Cable ship *Tyrian*:—			
Maintenance and repairs	68,310 81		
Subsidies, stationery, line and office material and contingencies	8,528 07		
Gulf general	8,034 28		
Ontario:—			
Pelee Island line	760 96	190 85	
North-west Territories lines	28,632 05	5,547 52	
British Columbia:—			
Alberni-Cape Beale	382 45	52 69	
Alberni-Clayoquot	3,258 45	516 48	
Golden-Windermere	2,188 28	656 19	
Kamloops,-Nicola,-Penticton, Vernon-Kelowna	9,642 35	6,292 95	
Nanaimo-Comox	3,756 87	2,534 02	
Vancouver-Salt Spring	249 90	185 03	
Victoria-Cape Beale	5,359 75	520 49	
B. C. service generally	1,293 41		
Yukon:—			
Ashcroft-Dawson	169,763 34	64,979 87	
Telegraph service generally	1,668 46		
Total	366,227 20	91,061 70	

Signal Service messages, Meteorological Service messages and reports, and Fisheries bulletins are handled free of tolls.

DEPARTMENTAL TELEPHONE SERVICE.

At the end of March, 1907, the telephone connections with the central offices of the Bell Telephone Company at Ottawa, listed as chargeable to the special appropriation, numbered 303, the annual charge for which amounts to $9,513.31. The connections are distributed amongst the several departments as hereunder:—

Department.	Offices.	Residences.	Annual charge.
			$ cts.
Agriculture	7	4	326 25
Auditor General	6	1	202 50
Census Branch	1	1	63 80
Customs	5	2	207 53
Dominion Police	8	3	324 81
Exchequer Court	1	2	77 43
Finance	5	4	277 56
Governor General (including private system)	7	2	324 63
House of Commons	15	3	583 11
Indian Affairs	4	1	142 56
Inland Revenue	4	4	292 50
Interior (including line to Observatory)	35	4	1,203 75
Geological Survey	2	2	108 81
Justice	7	10	493 56
Labour Department	1	2	90 00
Mounted Police	3	1	108 81
Marine and Fisheries	12	6	548 28
Militia and Defence	13	11	701 01
Parliamentary Library	1	2	90 00
Privy Council	3	5	247 50
Post Office Department	8	5	386 10
Public Works Department (including Ottawa River Works)	36	15	1,588 50
Printing and Stationery	4	2	195 03
Railways and Canals	7	5	338 31
Secretary of State	3	4	204 75
Senate	6	1	195 00
Trade and Commerce	3	4	191 25
	197	106	9,513 31

APPENDED TABLES.

The usual tabular statements of the lines and offices, staff, &c., of the telegraph service, following hereupon, will be found to contain whatever additions or changes have been made up to March 31, 1907.

D. H. KEELEY,
General Superintendent.

OTTAWA, October 16, 1907.

DOMINION TELEGRAPH SERVICE.

NEWFOUNDLAND TELEGRAPH SERVICE.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Memo.
		Miles.	$ cts.	
1	Port au Basque	0	50 00 or commission.	N.B.—The commission is 25 per cent upon all business to and from the office; said commission guaranteed not to be less than at the rate of $50 per annum.
2	Cape Ray Lighthouse	14	50 00 "	
	Totals	14	100 00	

N.B.—The above short line is constructed in connection with the Signal Service, and connects at Port au Basque with the land line system of the Anglo-American Telegraph Company.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

ANTICOSTI TELEGRAPH SYSTEM.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1	Fox Bay	0	Geo. Cabot	300 00	May 13, 1900	Increased from $200 since December, 1902.
2	Heath Point	23	A. Tremblay	50 00 or commission.	Aug. 1, 1900	For local agency.
				200 00 per annum	Nov. 1, 1902.	For cable repeating station.
3	South Point Lighthouse	32½	E. Leprise	50 00 or commission.	July 1, 1903.	
4	Shallop Creek	17½	B. Bradley	240 00 per annum.	" 7, 1881.	
5	Salt Lake	52½	Jos. Bourget, opr.	360 00 " "	" 17, 1906.	Plus $1 per day when on duty as general repairer.
			Mrs. Bourget, opr.	50 00 " "	" "	
6	South-west Pt. Lighthouse	15	A. Z. Lemieux	420 00 " "	" 1, 1901	Increase from $300 since May, 1903.
....	Jupiter River	7	..	50 00 or commission.		
....	Otter River	17½		50 00 "		
....	Bescie River	22		50 00 "		
....	Cape Eagle (Ellis Bay)	10	Jas. Dugnay	50 00 "	June 20, 1906	
7	West Point Lighthouse	9	A. Malouin, dist. supt.	344 00 per annum	Aug. 1, 1900	
			" " opr.	480 00 "	" 10, 1881	Temporary.
			Liz. " substitute, opr.	50 00 "		
8	English Bay	3	F. Cabot	300 00 "	July 1, 1882.	
....	Mechastic Bay (cable landing)	14½				
	Totals	233½		3,044 00		

South-west Point connects with l'Anse à Fougère, Gaspé, by cable 44¼ knots; and from Mechastic Bay connection is made with Long Point of Mingan by cable 21 knots.

0	L'Anse à Fougère		Thos. Dupuis	17 00		Special allowance for the cable terminus. A testing station only*.
1	Gaspé Basin	28	J. J. Annett	540 00	Oct. 16, 1881	Transfer office. Connection with G. N. W. telegraph system. The salary was $420 per year previous to December 1, 1903.
		28		557 00		

* This payment was made to Mr. N. Bernier prior to October, 1903.

MAGDALEN ISLANDS SYSTEM.

Magdalen Islands Section.

1	Amherst	0	Miss J. Shea	50 00	or commission	Oct.	1, 1882	The commission is 25 per cent on all business to and from the office in each instance; said commission guaranteed to be not less than at the rate of $50 per annum.
2	Amherst Lighthouse	9	Wm. Cormier	50 00	"	June	11, 1881	
3	Etang du Nord village	15	I.G. Binet, gen. repairer	400 00	"	Dec.	1, 1900	Plus $1 per day when absent on duty.
			Mrs. A. Binet	50 00	"	"	1, 1881	
4	Etang du Nord Lighthouse	1	N. Arseneault	50 00	"	Sept.	1, 1891	Two wire loop line.
5	Grindstone Island	5	W. Leslie	Commission 25 p.c		May	20, 1897	
6	Grindstone West		A. LeBourdais, dis. supt	720 00		Aug.	17, 1880	Plus $1 per day when absent on duty. The salary was $600 per annum prior to May 1, 1904.
			Mrs. LeBourdais, oper.	50 00		Sept.	15, 1893	
			J. J. LeBourdais	37 00	per month	May	25, 1904	Temporary assistant.
7	House Harbour (½ knot cable)*	3	Camille Delaney	50 00	or commission	June	1, 1903	
8	Wolfe Island	28½						
9	Grosse Isle	11	N. Clark	360 00	or commission	June	1, 1888	For repeating station. Prior to Dec. 1, '02, the allowance was $200 and commission for local agency.
			J. Quinn	50 00	"	Dec.	1, 1902	
10	Grand Entry	11	Mrs. F. Atkins	50 00	"	Feb.	18, 1882	
11	*Point Basse—2 Wire loop from House Harbour	4	H. Arseneau	50 00	"	Aug.	1, 1902	
12	South Beach—2 Wire loop	3	E. Chevrier	50 00	"	July	1, 1905	
13	Bryon Island	1	W. Dingwell	150 00	"	Jan.	1, 1903	Two-wire loop line from terminal hut for Grosse Isle and Anticosti cables.
		91½		2,130 00				

Grosse Isle connects at Old Harry with Meat Cove, C.B., by cable 55 knots; and connects with Bryon Island by cable 11 knots; thence to Heath Point Anticosti 93 knots.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

CAPE BRETON SECTION.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1	Meat Cove	0	Miss E. Dawson	50 00 or commission	June 18, 1907.	Closed August 31, 1906, and reopened June 18, 1907.
2	Bay St. Lawrence including connections to cables	14	V. Therriault	720 00	May 1, 1902.	Cable station at Bay St. Lawrence in place of Meat Cove since September 1, 1906. The commission is 25 p.c. on all business to and from the office in each instance; said commission guaranteed to be not less than at the rate of $50 per annum.
3	Aspy Bay	5	L. Y. Nichols.	50 00 or commission	July 1, 1894.	
4	Dingwell (loop line)	3¾ / 2¾	Murdock McLeod	50 00 "	Aug. 31, 1898.	The loop line formerly running to White Point has been withdrawn.
5	Cape North (Inland)	3	N. A. McDonald	50 00 "	May 13, 1904.	
6	Neil's Harbour (half-way house loop line)	11 / 1¾	M. McLeod	50 00 "	April 1, 1887.	
7	Ingonish North Bay	9	Mrs. S. S. Burke	50 00 "	June 1, 1884.	Former Agent J. M. Burke deceased.
8	South Ingonish	10½	Geo. Brewer	50 00 "	May 7, 1899.	
9	Ingonish Ferry	2	Anna McLeod	50 00 "	Oct. 1, 1903.	
10	French River ¼ knot cable	21	John McDonald	50 00 "	April 1, 1899.	
11	Indian Brook	5	Annie McDonald	50 00 "	Aug. 1, 1901.	
12	Murray (loop line)	14 / 10	R. B. Matheson	50 00 "	Jan. 29, 1902.	
13	Englishtown ¼ knot cable	7	W. Bingham	120 00 and commiss., and 25 p.c. R. & Cks.	July 19, 1882.	Switching point for Baddeck line.
14	South Gut, St. Ann's (on loop)	5	Rachael Morrison	50 00 or commission	Sept. 1, 1904.	Closed December 31, 1899.
15	Baddeck (on loop)	13	L. M. Anderson	100 00 and 25 p.c. R. & Cks	June 17, 1904.	Salary.—$120 per year previous to this appointment. Former Agent Mr. A. Anderson.
	Englishtown (back on loop)	18				This loop to Baddeck starts from and returns to Englishtown.
16	Kelley's Cove, N. Campbellton	6	J. S. Burchell	50 00 or commission	July 7, 1904.	
17	Big Bras d'Or ¼ knot cable	2½	Mrs. E. Livingston	100 00	Jan. 1, 1889.	Increase from $50 to $100 since November 1, 1904.
18	North Sydney	12½	W. U. Tel. Co	Commis'n only		The commission is 50 p.c. on local business and 25 p.c. on through messages: and covers supervision of line and office accommodation at North Sydney.

	Repairers Sections.						
	Meat Cove—Sugar Loaf		M. McAskill	80 00		April 1, 1898.	
	Sugar Loaf—Ingonish		Charles Smith	100 00		" 1, 1898.	Increase from $80 since June 1, 1903.
	Ingonish—Englishtown		R. A. McDonald	100 00		" 1, 1898.	
	Englishtown—Baddeck		D. McAulay	60 00		Nov. 1, 1904.	
	" North Sydney		Dan Campbell	100 00		July 14, 1903.	
	Murray—Indian Brook		John Smith	25 00		June 17, 1902.	
	Ingonish		S. S. Burke, gen. repr.	420 00		April 1, 1904.	Payment includes horsehire.
		176¾		$2,575 00			

MABOU-CHETICAMP AND MEAT COVE, C.B., TELEGRAPH SYSTEM.

1	Mabou	0	Mrs. M. McDonald	120 00	per annum	April 1, 1887.	
2	Strathlorne	9	Rosela McLean	50 00	or commission		Office closed January 13, 1907.
3	Inverness Town (Broad Cove)	11	Helen McLean		all rec'ts & cks.		Acting manager since March 18, 1907.
4	South-west Margaree	12	J. D. McFarlane	50 00	per annum	Feb. 1, 1898.	The commission is 25 p.c. of the Government line tolls, and is guaranteed to amount to not less than $50 per annum. Where 50 p.c. commission is paid there is no guarantee as to amount.
5	Margaree Harbour	5	H. K. McLean	50	p.c. R. & Cks.	Oct. 20, 1896.	
6	North-east Margaree (loop line wire)	10	Mrs. J. D. Ross	50 00	or commission	Feb. 1, 1898.	
7	Grand Etang	8	G. Doucet	50 00	"	Sept. 13, 1902.	Closed March 31, 1905.
8	Cheticamp	8	Chas. J. Au Coin	50 00	"	Aug. 3, 1905.	
9	Pleasant Bay	27	M. J. McIntosh	50 00	"	Oct. 15, 1903.	
10	Cape St. Lawrence	15	C. Jamieson	50 00	"	Jan. 1, 1904.	
	Meat Cove	4	See Meat Cove Line / D. C. Dawson, D. Supt.	150 00	"	" 1, 1887.	
	Repairers Sections.						
	Mabou—Strathlorne		A. G. McDougall	40 00	per annum	Nov. 3, 1902.	
	Strathlorne—S. W. Margaree		J. D. McFarlane	40 00	"	June 4, 1902.	
	S. W. Margaree—Margaree Harbour		Alex. McFarlane, sr.	40 00	"	" 4, 1902.	
	Margaree Harbour—Grand Etang		H. K. McLean	25 00	"	" 1, 1905.	
	Cheticamp		Joseph L. Chaisson	40 00	"	" 1, 1905.	
	Cheticamp—Barren		J. G. Chaisson	40 00	"	July 1, 1905.	
	Barren—Pleasant Bay		J. A. McLean	40 00	"	" 20, 1903.	
	Pleasant Bay—Polits Cove		K. Fraser	40 00	"	" 20, 1903.	
	Polits Cove—Halfway Shanty		E. Fraser	30 00	"	" 20, 1903.	
	Halfway Shanty—Meat Cove		R. Fraser	40 00	"	" 20, 1903.	
	General lineman		V. A. McLellan	420 00	"	Mar. 1, 1905.	Salary covers horse-hire, &c.
	Totals	109		1,415 50			

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

NORTH SYDNEY, BOULARDERIE AND ESKASONI SECTION.

No.	Stations.	Intermediate Distance.	Agents and operators.	Salaries per annum.	Date of Appointment.	Memo.
	Boularderie.					
	North Sydney.	See Meat Cove Line				
1	Little Bras d'Or (M.C. poles)	5	Miss D. Edna Grantmyer	$50 00 or commission	Dec. 1, 1906	The commission is 25 p. c. of the Govt. line tolls in each instance and is guaranteed to amount to not less than $50 per annum.
2	Alder Point (loop line)	5	Mrs. John Arsenault	50 00 "	" 1, 1906	
3	Groves Point (I mi. M. C. poles)	3	Mrs. Mary Dunlop	50 00 "	" 1, 1906	
4	Hillside	4	Mrs. Christina McKenzie	50 00 "	Feb. 1, 1907	
5	Boularderie West	4	John McIntyre	50 00 "	Jan. 1, 1907	
6	S. S. Boularderie	3	Donald McRae	50 00 "	" 1, 1907	
7	Point Clear	4	Mrs. M. McLeod	50 00 "	Dec. 1, 1906	
8	Upper Kempt Head	7	Mrs. Murdock McKenzie	50 00 "	Oct. 6, 1904	
9	Ross Ferry	6½	Robert Campbell	50 00 "	" 6, 1904	
10	Boularderie Centre	6	Mrs. J. B. McKenzie	50 00 "	" 6, 1904	
	Big Bras d'Or	7½	See Meat Cove Line			
		55				
	Eskasoni.					
	North Sydney					
1	French Vale	11	John J. McLean	50 00 "	March 25, 1907	
2	Gillis Lake	5	Daniel H. Gillis	50 00 "	Feb. 28, 1907	
3	East Bay	4	Miss H. L. McNeal	50 00 "	" 18, 1907	
4	North Side East Bay	6	James J. Gillis	50 00 "	Jan. 15, 1907	
	Eskasoni	5				
5	Castle Bay	6	Miss Maria McDonald	50 00 "	Jan. 10, 1907	
		37				
	Repairers Sections.					
	Alder Point—Little Bras d'Or		Captain John Arsenault	50 00		
	Big Bras d'Or — Upper Kempt Head		J. A. C. McKenzie	50 00		
	Little Bras d'Or—Upper Kempt Head		R. R. McKenzie	50 00		Appointments date from June 1st, 1907.
	North Sydney—Gillis Lake		Augus J. McLean	50 00		
	Gillis Lake—Eskasoni		Duncan Gillis	50 00		

	General repairer	92	Joseph Logue	540 00 1,540 00			Salary increased from $420 to $540 per annum March 1st, 1907.

Meat Cove station connects with the Magdalen Islands system by a cable to Old Harry Head, 55 knots, and with St. Paul's Island by a cable of 20 knots. The latter is operated with telephones.

1	St. Paul's Island	3	S. C. Campbell	50 00	Oct.	1, 1890	Land wire across the Island, Atlantic Cove to Trinity Cove.

NORTH SYDNEY—MEAT COVE AND PORT HAWKESBURY SECTION.

	Mabou	0					(See Mabou—Meat Cove section.)
1	Port Hood	10	D. J. McDonald	50 00*	July	1, 1903	
2	Judique	10	Mrs. McDonald	50 00	"	1, 1904	
3	Craignish	8	Allan Cameron	50 00	"	1, 1903	
4	Port Hastings	10	Miss M. McFarlane	50 00	"	1, 1903	
5	Port Hawkesbury	3¾	Miss E. McDonald	120 00	"	1, 1903	
6	River Bourgeois	26	M. E. Boyd	50 00	"	1, 1903	
7	St. Peter's	6	D. Morrison	100 00	Nov.	1, 1903	Main battery at St. Peters.
8	Lower Lardoise (½ mile loop)	7¼	Miss Mary M. Finlayson	50 00	June	22, 1905	
9	Grand River	26	Miss E. A. Finlayson	50 00	"	1, 1903	
10	St. Esprit (Laframboise Intervale)		Mrs. J. D. Morrison	50 00	Sept.	1, 1906	
11	Fourchu		Miss Ida P. Cann	50 00	Mar.	25, 1907	
12	Gabarous (3 mile loop)	16	Miss C. Grant	360 00	Jan.	16, 1904	Repeating office. Increase subject to approval.
13	Louisbourg	14	Wesley Townsend	50 00	Feb.	1, 1904	
14	Main à Dieu	13	Miss Mary Dickson	50 00	June	1, 1904	$50 additional to Main à Dieu agency for care of main battery.
	To cable landing	1					
	Cable across channel	1¾	E. E. Pope	50 00	Aug.	15, 1904	
15	Scatarie Island (Western Light)		J. T. Martel	50 00	"	1, 1904	
16	" (Eastern Light)	7¼					
	Repairers Sections.						
	Mabou and Judique		J. A. Campbell	50 00	Aug.	1, 1904	(See Mabou—Meat Cove section.)
	Judique and Port Hawkesbury		J. N. McIsaac	50 00			
	Port Hawkesbury Gabarous		G. E. Bisset-Gent. Repr.	420 00			
	Gabarous		No appointments, only the terminal offices in operation.				This line was opened for business Dec. 11, 1903.
	Junction (wire only 3 miles)						
	Marion Bridge	35½					
	Perry Lewis						
	Leitche's Creek						
	North Sydney						
	Totals	202½		1,750 00			

* Or commission. The commission is 25 per cent of the Government line tolls, guaranteed at rate of $50 per annum.
North Sydney transfer office, connection with W. U. Telegraph system.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

NOVA SCOTIA TELEGRAPH SYSTEM.

CAPE SABLE SECTION.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1	Barrington	0				This line has been leased to the Barrington Telephone Company from August 12, 1897. The lease is terminable at any time.
2	Newelton (including 1½ knots cable)	11				
3	Cape Sable Island light-house (including ¼ mile cable)	6¾				
	Totals	17¾				

EAST COAST SECTION.

N.B.—In connection with the Signal Service a land line, 208 miles in length, was erected in 1881, between Canso and Halifax, for a bonus of $16,000, and is maintained and operated by the Western Union Telegraph Company, without further cost to the Government.

BAY OF FUNDY, N.B., TELEGRAPH SYSTEM.

Grand Manan Section.

	Long Eddy Cable Hut to.						
1	Flagg's Cove	3	Mrs. C. C. Seely (D.Su.)	540 00	Nov.	18, 1880	*The commission is 25 p.c. on all business to and from the office in each instance; and commission guaranteed not to be less than at the rate of $50 per annum. When 50 p.c. commission is paid there is no guarantee as to amount.
	"	.....	Miss V. A. McFarlane	50 00 or commission	Oct.	1, 1903	
	"	.....	A. Gilmour, repairer	60 00	Dec.	1, 1894	
2	Castalia	2⅔	G. E. Dalzell	Commission 25 p.c.	June	1, 1898	
3	Woodward's Cove	3½	W. A. Fraser	" 50 p.c.	Feb.	28, 1893	
4	Grand Harbour	2	J. L. Newton	75 00 or commission	April	1, 1887	$25 per annum is included for repeating Whitehead branch.
5	Seal Cove	4½	J. A. Ingersoll	50 00 "	Sept.	22, 1899	
6	Southern Head Lighthouse	5½	O. McLaughlin	Commission 25 p.c.	April	22, 1897	Southern head office is now operated by telephone from Seal Cove.
	Branch Line.						
	Grand Harbour	0					
7	Cheney's Island (½ knot cable)	4¾	S. E. Russell	" 25 p.c.	Feb.	1, 1891	
8	Whitehead Island (¾ knot cable)	1½	Mrs. W. Cassaboom	50 00 or commission	"	1, 1903	
	Cable, Long Eddy to Liberty Cove	7¼					
	Liberty Cove Cable Hut to.						
9	Welchpool	7½	Wellington Parker, Lineman	2 00 per day	.....	.....	Employed occasionally.
			G. E. Mitchell	210 00 and commission	May	1, 1905	
	Cable across channel	1¾					
10	Eastport, Maine, U.S.A.	½	J. Cushing	200 00	Dec.	26, 1881	
	Totals	44¼		1,035 00			

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

CHATHAM-ESCUMINAC, N. B., TELEGRAPH SYSTEM.

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1	Chatham	0	Great Northwestern Telegraph Co.	185 00		This amount is paid for supervision of the line and office accommodation at Chatham.
2	Black Brook	5½	M. McDougall	50 00 or commission	July 1, 1904	The commission is 25 p. c. of the Government line tariff receipts in each instance, and is guaranteed to amount to not less than $50 per annum.
3	Baie du Vin	15	Mrs. M. Williston	50 00 "	Mar. 1, 1885	
4	Lower Hardwicke	6	Mrs. M. Brimmer	50 00 "	Aug. 1, 1891	
5	Escuminac	3¾	D. Lewis	50 00 "	Sept. 1, 1885	
6	Point Escuminac lighthouse	12	K. R. McLennan	50 00 "	Nov. 1, 1893	$12 per annum allowed for care of main battery at Point Escuminac.
	Totals	42¼		435 00		

GROSSE ISLE QUARANTINE TELEGRAPH SYSTEM.

	Quebec	0	Great Northwestern Telegraph Co.	185 00		This amount is paid for supervision of the line, and covers rent of pole line from Quebec to L'Ange Gardien, for which $35 per annum is charged.
	L'Ange Gardien	13				
	Orleans Island (cable)	¾				This commission is 25 p. c. of the Government line tariff in each instance, and guaranteed to amount to not less than $50 per annum.
2	St. Pierre	4½	C. Turcotte	50 00 or commission	Mar. 1, 1885	
3	Ste. Petronille	3¼	M. Plante	50 00 "	April 7, 1896	
4	St. Laurent	6½	M. Gobeil	120 00 and 25 per cent commission	Sept. 15, 1888	
5	St. Jean	7	P. Pouliot	120 00 and 25 per cent commission 480 00 per year	July 1, 1888 May 1, 1902	For local agency. Chief operator and repairer.
6	St. François	6¾	O. Lemelin	50 00 or commission	" 15, 1900	
7	Isle Réaux (including 2 knots cable)	3¼				
	Isle Réaux (land line)	2½				
8	Grosse Isle quarantine office (including 2 knots cable)	3½	Miss Julia Legacé	100 00 and 25 per cent commission	June 1, 1906	$4 per month for messenger serv. in summer, and $12 p. annum allowed for care of main batt. at Gr. Isle.
	Quarantine telephone system 2 wire line	1¾				NOTE.—The telephone system on Grosse Isle since May, 1893, has comprised 1¾ miles of 2 wire line with 11 connections or stations.
	Totals	52¾		1,155 00		

	Loop Line (2 wires.)						
	St. Jean-Ste. Famille	5½	P. Létourneau	50 00 or commission	April	2, 1904	

CHICOUTIMI AND NORTH SHORE OF ST. LAWRENCE TELEGRAPH SYSTEM.

Chicoutimi Section.

1	Bay St. Paul		F. Boivin	180 00 per annum. 25 p.c. commission	Previous to April	1, 1885	*The commission on business is 25 per cent of the Government tolls of the line; the amount guaranteed to be not less than $50 per annum.
2	St. Urbain	9	A. Boivin	50 00 or commissi'n*			
			Michel Fortin, repair	270 00 per annum	"	1, 1885	
3	La Galette	37	S. Onellette	100 00 or commission	Aug.	25, 1902	
4	Ferland	27½	B. Lavoie	50 00 "	Mar.	1, 1905	Plus $25 per year for operating branch line to L'Anse St. Jean.
5	St. Alexis	10	Mrs. D. Simard	50 00 "	Nov.	1, 1899	
6	St. Alphonse de Bagotville	3	Mrs. C. Levesque	150 00 per annum	June	1, 1906	J. Fortin's division includes the branch line to L'Anse St. Jean.
7	Chicoutimi	11½					
		98		1,110 00			
	Branch Line.						
	St. Alexis	0	Mrs. D. Simard	75 00			
8	St. Felix d'Otis	10	P. V. Lavoie	50 00	Nov.	1, 1905	
9	L'Anse St. Jean	30	J. Martel, repairer	210 00	May	1, 1904	
			R. Martel	50 00	Jan.	1, 1904	
10	Petite Sagnenay	8	M. Tremblay	50 00	Sept.	1, 1903	
11	Anse Cheval	6	Jos. Degagné	50 00	Feb.	1, 1905	(This office had been closed since April 30, 1904.)
12	St. Etienne	7					
	St. Catherine Bay	17	G. Boulienne (see North Shore W. B. Line)				
		78		485 00			
	Totals	176		1,595 00			

MURRAY BAY—ST. AGNES SECTION.

1	*Murray Bay*	0	Mrs. F. Vincent				(See Murray Bay, Bersimis section.)
2	St. Agnes	7½	Jos. Gaudreau	50 00	Jan.	1, 1904	
	Trinity (Guay)	7	Jos. Demeules	50 00	May	1, 1906	
		14½		100 00			
1	Bay St. Paul	0	F. Boivin				(See Bay St. Paul. Chicoutimi section.)
	Petite River	13	J. Bouchard	50 00	Dec.	4, 1903	Payment at Bay St. Paul $25 per year and $12 for battery care, for operation of this branch to Petite River.
		13		50 00			

Connections for these lines with the G. N. W. Telegraph System are made at Chicoutimi, Bay St. Paul and Murray Bay.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

CHICOUTIMI AND NORTH OF ST. LAWRENCE TELEGRAPH SYSTEM—*Continued.*

CHICOUTIMI SECTION—*Continued.*

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1	Tadousac	0	Eugene Caron	Commission.		
2	Sacré Cœur	12½	H. Gravel, repairer Miss L. Maltais	360 00 50 00		
3	Ste. Marguerite	8	Mrs. P. Hervieux	50 00		
4	Price Bros. & Co	2	Company	Accommodation.		
5	Descente des Femmes	34	Aug. Villeneuve	50 00		
6	Lac Laurent	9	S. Gagnon	50 00		
7	St. Fulgence	8	G. H. Gagnon	50 00		
8	Ste. Anne	8	P. Gauthier, repairer	See below.		
9	Chicoutimi	1	D. Villeneuve	"		
1	St. Charles	0	B. Boucher	50 00	Sept. 1, 1903	
2	St. Ambroise	10	A. Simard	50 00	June 1, 1905	
3	St. Leonard	7	Geo. Gagnon	50 00	Sept. 1, 1903	
4	Shipshaw, North	6	J. Murdock	50 00	" 1, 1903	
5	Shipshaw	3	F. Dufour	50 00	Nov. 1, 1905	
6	St. Anne	8	P. Gauthier, repairer	200 00	Aug. 1, 1903	
			D. Villeneuve, operator	600 00	April 1, 1906	
	Chicoutimi	3	J. Lapointe, "	360 00	April 1. 1906	
			A. Simard, inspector	564 00	April 1, 1906	
			T. Villeneuve, night op.	360 00		
			J. A. Couet, clerk	180 00		
			G. Guay, messenger	120 00		
			J. Fortin, repairer	420 00	June 1, 1897	
	Branch Line.	37		3,664 00		
	St. Anne	0	P. Gauthier			(See St. Charles—Chicoutimi section).
1	St. Fulgence	9	Rev. Geo. Gagnon	50 00	Jan. 1, 1904	
		0	John Brisson	360 00		
		9		410 00		
	St. Anne	0	P. Gauthier	50 00	Feb. 1, 1904	
1	Range 9	3	Thos. Simard	50 00	Nov. 1, 1905	
2	Lac Charles	3	A. Dufour	50 00	" 1, 1904	
3	Lac Clair	9	L. Boulianne	50 00	" 1, 1905	
		15		200 00		

NORTH SHORE (West of Bersimis).

1	Murray Bay	0	Mrs. F. Vincent	50 00 or commission	Previous to April 1, 1885	Plus $25 per year, and $12 for battery care for operation of branch to Guay.
2	Cap à l'Aigle	4	Mde. Bergeron	50 00 "	June 1, 1905	
3	St. Fidèle	6	Jos. Desbiens	50 00 "	Dec. 1, 1904	
4	Port au Persil	7	A. Brassard	50 00 "	May 1, 1889	
			A. Brassard, repairer	210 00 "	June 1, 1887	
5	St. Siméon	4	D. Gaudin	50 00 "	Dec. 1, 1887	
6	Baie des Rochers	12	G. Savard	50 00 "	June —, 1887	
7	St. Catherines Bay } Br. L.	17	G. Boulianne	100 00 "	Nov. —, 1886	
8	St. Etienne } Br. L.		E. Boulianne, repairer	210 00 "	Sept. 1, 1899	
9	Tadousac (1½ knot cable)	13	J. E. Caron	50 00 "	Nov. 1, 1888	
10	Sacré Cœur } Br. from Tadousac.	12½	L. Maltais	50 00 "	Dec. 6, 1901	
11	Bon Désir	10	Mde. E. Gauthier	50 00 "	Aug 1, 1904	
12	Bergeronnes	5	M. Savard	50 00 "	April —, 1885	
13	Escoumains	12	J. H. Topping	50 00 "	" —, 1885	
14	Baie des Bacons	8	P. Bouchard		May 6, 1902	Commission at 25 per cent, without guarantee at Baie des Bacons.
15	Mille Vaches	8	J. A. Puisé	50 00 or commission	April —, 1885	
16	Anse Hamilton	11½	C. P. Easton		Sept. 1, 1903	Accommodation office.
17	Portneuf, light	6	S. Bouchard	50 00 or commission	July 1, 1890	
			E. Courbron, repairer	420 00	April 1, 1888	
18	Sault au Cochon	7		50 00 or commission		Sault au Cochon closed September 30, 1896.
19	Bersimis	31	A. Maloney, agent	500 00	Sept. 21, 1896	
			E. Pope, dist. supt.	600 00	April —, 1885	
	*Totals	174		2,920 00		

*NOTE.—In the estimates, the maintenance of the Chicoutimi and North Shore line is provided under head of North Shore Line. They are operated conjointly.

NORTH SHORE (East of Bersimis).

1	P'te aux Outardes (cable)	12	H. Tremblay	50 00 or commission	Dec. 1, 1896	
	Pte Paradis (Manicouagan cable landing)	18				The repeating office formerly at Manicouagan was removed to Bersimis in September, 1896.
2	Scougall's Mills 14 mile loop line from P'te Paradis	28	Accommodation	25 p.c. commission	Aug. —, 1901	
3	River Godbout (cable)	26	N. A. Comeau	50 00 or commission	Oct. 15, 1885	
4	Pointe des Monts	18½	L. F. Faffard	50 00 "	Dec. 28, 1883	
5	Trinity Bay West	5½	Z. Poulin	50 00 "	May 16, 1884	
6	Trinity Bay East	2½	A. Bilodeau	25 p.c. or commission	" 1, 1889	
7	Caribou Islands	7	I. Comeau	" "	Sept. 1, 1889	

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

CHICOUTIMI AND NORTH OF ST. LAWRENCE TELEGRAPH SYSTEM—*Continued.* North Shore (East of Bersimis).

No.	Stations.	Inter. mediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
8	Pointe aux Anglais	10½	Paul Côte	Accommodation office	Jan. 10, 1895	No commission is paid at this office.
9	Pentecost	6½	P. Molloy	250 00 per annum	Sept. 17, 1905	
10	Ste. Marguerite	47½	A. Therriault	180 00 per annum	July 1, 1888	
11	Clark City	5	Accommodation office	25 p. c. commission	April 17, 1903	
12	Seven Islands	17¾	P. E. Vignault F. Gallienne, repr.	180 00 per annum 540 00 "	Jan. 2, 1884 Nov. 5, 1906	Plus 50 cents per day when absent on duty.
13	River Moisie	15½	J. Poirier	50 00 or commission	June 1, 1896	There is also an accommodation office in operation at Moisie in the fishing season.
14	Pigon	28	Mrs. Peter Wright, op Peter Wright, repr.	100 00 " 112 00 "	Oct. 1, 1902 " 1, 1902	
15	Little River	29	Miss H. Leberge	50 00 "	" 10, 1900	
16	Sheldrake	15	Mrs. Alphonse Girard	50 00 "	Dec. 1, 1904	
17	Thunder River	6½	Mrs. H. Cody	50 00 "	Feb. 1, 1890	
18	Magpie	14	Geo. Molloy	50 00 "	Oct. 1, 1889	
19	St. John River	9	B. Chambers	50 00 "	" 1, 1889	
20	Long Point	10	E. H. Tetu Dist. Supt Mrs. E. H. Tetu, opr. A. Fournier, opr	1,080 00 per annum 300 00 " 500 00 "	Nov. 1, 1891 " 1, 1903 Sept. 11, 1906	Long Point is the repeating office for the Anticosti, cable in operation since September 1, 1891.
21	Mingan	7	M. J. Maloney	50 00 or commission	Oct. 1, 1889	
22	Point Esquimanx	24	Mrs. D. C. Hould Edwd. Cyr, inspr.	240 00 per annum 500 00 "	Sept. 7, 1897 Nov. 2, 1902	Allowance for office rent $4 per month. Plus 50 cents per day when absent on duty.
23	Betchouanes	20	Jos. Picard, op. & rep.	212 00 "	July 15, 1904	
24	Piastre Bay	23	S. Tanguay, repr. Mrs. J. Beetz, opr.	112 00 " 100 00 "	Sept. 18, 1902 " 18, 1902	
25	Watichou	15	Mrs Cl. Bonrque, opr John Bourque, repr.	100 00 " 100 00 "	Dec. 1, 1903 " 1, 1903	This office was closed on withdrawal of former agent from Sept. 4, 1903, $12 rent to J. Beetz.
26	Aguanus	21¾	S. Galant, repr Mrs. Galant, opr.	112 00 " 100 00 "	Sept. 3, 1902 " 3, 1902	
27	Natashquan	21	C. Vignault, repr. Miss Vignault, opr.	112 00 " 100 00 "	" 5, 1902 " 5, 1905	
28	Kegaska	33	Geo. Anderson, repr. Miss Anderson, opr. J. L. Osborne, inspr.	112 00 " 100 00 " 500 00 "	" 16, 1902 " 16, 1902 " 1, 1902	Plus 50 cents per day when absent on duty.
29	Masquaro	18	Wm. Foreman, opr & rep	212 00 "	June 1, 1903	
30	Romaine	25	M. Blais, repr. Miss R. Blais, opr.	112 00 " 100 00 "	Sept. 17, 1902 " 17, 1902	
31	Wolf Bay	24	R. Jones, repr. Mrs. R. Jones, opr.	150 00 " 100 00 "	Nov. 26, 1902 " 26, 1902	
32	Pointe au Maurier	24	J. Galibois, repr. Miss P. Galibois	112 00 " 100 00 "	Sept. 19, 1902 " 19, 1902	

33	Harrington	20	J. Jones, repr.	112 00	"	"	20,	1902	
			Mrs. Jones, opr.	100 00	"	"	20,	1902	
34	Whale Head	17	Nap. Nadeau, rep. & opr.	212 00	"	Jan.	21,	1903	
35	Mutton Bay	20	Alf. Cormier, rep. & opr.	444 00	"	June	1,	1902	
36	Baie de Ha.	27	Mrs. J. Monger, opr.	100 00	"	"	14	1904	
			J. Monger, rep.	112 00	"	"	14	1904	
37	St. Augustine	27	G. W. Burgess, rep. & opr	212 00	"	Sept.	25,	1902	
38	Coxipi	24		212 00	"				Closed June 14 1904.
39	Rocky Bay	30	Miss B. E. Chevalier, o.	100 00	"	April	20,	1904	
			L. O. Chevalier, rep.	112 00	"	"	20,	1904	
40	St. Paul River	21	G. Chevalier, repr.	112 00	"	Oct.	2,	1902	
			Miss Chevalier, opr.	110 00	"	"	2,	1902	
41	Brador Bay	29	Johnny Jones, opr.	100 00	"	June	13,	1903	
			P. C. Vignault, insp.	500 00	"	Feb.	1,	1903	Plus 50 cents when absent on duty.
42	Blanc Sablon	6	Thos. Morel, rep. & opr.	212 00	"	Oct.	1,	1902	
43	Forteau Bay	13	A. Hart, repr. & opr.	212 00	"	July	19,	1902	
44	Pointe Amour	17	Thos. Whyatt, rep. & opr	112 00	"	Feb.	17,	1903	
45	West St. Modeste	16	Jas. Bolger, repr. & opr.	212 00	"	Oct.	5,	1902	
46	Red Bay	13	Geo. Moore, repr.	112 00	"	"	9,	1902	
			Miss Moore, opr.	100 00	"	"	9,	1902	
47	Chateau Bay	30				Sept.	1,	1902	closed Dec. 1, 1906.
						Dec.	1,	1902	
						Nov.	1,	1903	
48	Belle Isle	23¾	J. C. Colton, opr.	360 00 per annum		Sept.	14,	1902	
	Totals	916		10,896 00					

ONTARIO—PELEE ISLAND TELEGRAPH SERVICE.

1	Leamington		J. McR Selkirk, D. Supt	50 00	Nov.	1,	1888	
2	Bairds	1	Accommodation office.		"	2,	1904	
3	Leamington Dock	1	F. Deslaurier, accommodation office		"	1,	1895	
4	Tildens	5	Accommodation office.		April	1,	1905	This is the connection that was formerly made with the club house near by.
5	Point Pelee	5	W. A. Grubb	Commission 25 p.c	Nov.	1,	1888	
	Leamington Dock to North Point Cable	17						The cable formerly 9½ knots from Point Pelee to the Island is now laid as here indicated 17 knots. The change was affected in August, 1901.
6	North Point Lighthouse	1	J. R. Ledwell	Commission 25 p.c	June	1,	1899	
7	North Dock	2	C. B. Quick	" "	Nov.	1,	1888	
8	McIntyre's Corner	2½		" "				Closed in August, 1904.
9	West Dock	2½	A. M. McCormick	" "	Nov.	9,	1888	
10	South Dock	5½	Mrs. F. B. McCormick	" "	Aug.	1,	1904	
	Totals	42½		50 00				

NOTE: This line is operated by telephone.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

QU'APPELLE—ATHABASKA LANDING SECTION.

No.	Stations.	Intermediate. Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
		Miles.		$ cts.		
1	Qu'Appelle	0	R. C. Macdonald, supt.	1,500 00	Oct. 1, 1905	
			J.S.Macdonald,gen.ins	2,000 00	June 1, 1905	Resides at Kamloops.
			C. P. R. Tel. Co.	420 00	Dec. 1, 1906	The agent operator at Qu'Appelle is joint with the C. P. R.
			J. W. Wilson, lineman	600 00	Mar. 1, 1902	
2	Ft. Qu'Appelle	17	P. R. Elmer	600 00	Aug. 15, 1906	Miss Johnstone resigned Aug. 15, 1906.
3	Lipton	11	C. P. R. Tel. Co.	Commission 10 p. c.	May 1, 1906	Agent operator at Lipton, joint C.P.R.
4	Touchwood	29	J. Kelly		June 1, 1906	Agent operator paid by H. B. Co.
5	Kutawa	6	A. VonLindeburgh	720 00	Nov. 1, 1883	
6	South Humboldt	78	H. J. Macdonald	720 00	Feb. 1, 1904	
7	Saskatoon	69	C. P. R. Tel. Co	300 00	Jan. 1, 1892	
			G.T. Clement, lineman	600 00	Oct. 16, 1903	Agent operator joint with C. P. R. Can. Northern agent acts as agent on commission.
8	Warman	14	Can. Nor. Ry. Co.	Comm. 25 p. c. of receipts	Nov. 23, 1905	Operated on commission.
9	Henrietta	38	W. J. Salisbury	720 00	Oct. 1, 1886	
10	Battleford	47	J. D. Noel	720 00	" 1, 1900	
			Wm. Dewan	600 00	Mar. 1, 1907	G. Donovan resigned July 31, 1906.
11	Bresaylor	27	J. T. Gallahan	720 00	Dec. 1, 1900	
12	Lloydminster	70	E. A. McCleneghan	600 00	April 1, 1904	
13	Onion Lake	50	H. McCleneghan	720 00	Aug. 1, 1899	
14	Moose	33	G. G. Mann	720 00	" 1, 1902	
15	St. Paul des Metis	32	C. Boulane	600 00	Nov. 1, 1906	J. A. Therien, resigned Oct. 31, 1906.
16	Saddle Lake	13	J. W. Carroll	720 00	Sept. 1, 1900	Telephone Line from Saddle Lake to Industrial School 6½ miles
17	Victoria	37	R. Gordon	600 00	Feb. 1, 1905	
18	Andrew	10	B. Carey	600 00	Mar. 15, 1906	Telephone line from Andrew to Whitford 6 miles.
			C. Norn, lineman	600 00	" 15, 1906	
19	Star	18	E. A. Holmes	600 00	Aug. 2, 1904	
20	Ft. Saskatchewan	25	A. W. M. Campbell	600 00	Oct. 1, 1898	
21	Edmonton	18	Geo. E. MacLeod	900 00	Nov. 6, 1906	
			W. McKay, lineman	780 00	May 1, 1886	
22	Athabaska Landing	98	Jas. McKernan	600 00	Oct. 1, 1904	
		750		18,860 00		
	Telephone extension.					
23	Whitford	7	The posmaster	Commission 25 p. c.	July 1, 1905	Connection is made with the telegraph office at Andrew.

Branch Lines.

	Edmonton					These branch lines are operated by the Edmonton District Telephone Co.
23	Winterburn	8				
24	Stoney Plain	5½				
25	Spruce Grove	8				
26	Stoney Plain Station	6½				
27	" Centre	3½				
28	St. Albert	9				
29	Raye	12				
30	Rivière qui Barre	8				
31	Alexandria	5				
		65½				

Wood Mountain Section.

1	Moose Jaw		C. P. R. Tel. Co	240 00	Dec. 1, 1891	The Agt. operator at Moose Jaw is joint with C.P.R.
			H. Sikes, Batteryman	120 00	Dec. 1, 1893	
2	Wood Mountain	90	J. H. Thomson	600 00	Dec. 1, 1890	
			F. Brown, Lineman	600 00	Nov. 1, 1905	
3	Willow Bunch	40	M. A. Noel	600 00	Oct. 19, 1904	
		130		2,160 00		

Duck Lake Section.

1	Batoche		D. H. Grant	120 00	Oct. 1, 1902	
2	Duck Lake	9	H. S. Perkins	120 00	Apr. 1, 1907	A. H. Gordon resigded March 31, 1907.
		9		240 00		

Banff Telephone System.

	Local System in Banff National Park		H. Douglas (Supt.)			This system is looked after by Mr. Douglas, superintendent of the National Park.
			J. H. Grierson (Lineman)	25 00		
				25 00		

Totals—Number of offices, 36.
Mileage, 958.
Employees, 35.
Salaries per annum, $19,225.00.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

LINES IN BRITISH COLUMBIA.

No.	Stations.	Intermediate Distance.	Agent, &c.	Positions.	Salaries per Annum.	Date of Appointment.	Memo.
	Kamloops—Lower Nicola.	Miles.			$ cts.		
	Telephone Line.		(See note in margin).				Note.—This line is operated under the superintendence of the resident architect at Victoria. For conversations 25c. for 5 minutes, half that rate for each additional 5 minutes or fraction thereof.
1	Kamloops	0	C. S. Stevens	Dist. Sup.	* 1,200 00	June 1, 1904	
			Miss B. McKnight	Clk & Ag.	420 00	July, 1901	Note.—The lessees pay a monthly rent for the connections, and are allowed 25 per cent commission on local tolls for messages and conversations of non-subscribers.
2	Anderson Creek	12	W. McLeod	Agent		" 1901	
3	Nicola		Mrs. M. V. Munro	Exc. oper.	480 00	" 1901	
4	Stumps Lake	13	Thos. Bunman	"		" 1901	
5	Beaver Ranch		J. W. Moor	"		" 1901	
6	Quelchena	20	E. O'Rourke	"		May, 1900	Three additional connections in July, 1901.
7	Nicola Lake	9	A. E. Howse	"		" 1900	Add at Nicola Lake, July 1, or Government Office, Dr. Sutton, A. R. Carrington.
8	Coutlee		Blair & Co.	"		July, 1901	
9	Lower Nicola	13	G. Armstrong	"		May, 1900	
10	Aspen Grove	24		"			
11	Otter Valley	2		"			
12	Princeton	26	A. E. Howse & Co.		180 00	Feb. 1, 1905	
13	Hedley	25	John Love	Exc. oper.	480 00	" 1, 1905	See note in body of report.
14	Keremeos	20		"			
15	Fairview	12		"			
16	Penticton	37	J. A. Schubert	"	120 00	" 1, 1905	
	Totals	235					

* Increased to $1,200, March 1, 1907.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

BRITISH COLUMBIA—*Continued.*

No.	Stations.	Intermediate. Distance.	Agents, &c.	Positions.	Salaries per Annum.	Date of Appointment.	Memo.
	Vernon-Kilowna Line.	Miles.			$ cts.		This line is operated both as a telephone and telegraph line.
1	Vernon	0	Miss G. E. Seaton	Agent and operator..	360 00	Mar. 1, 1905	Joint agent with C. P. Telegraph.
			A. S. Muir	Telephone Agent	Commiss.	" 1, 1905	The commission is 25 per cent of the Government line tolls.
2	Kilowna	35	H. H. Miller & Co	Agts tel. and telegr..	720 00	" 1, 1905	
			A. L. Weeks	Lineman	720 00	Aug. 1, 1905	
	Totals	35			1,800 00		

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

BRITISH COLUMBIA—*Continued.*

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
	Victoria—Cape Beale.	Miles.		cts.		
			(See note in margin).....	.....	.....	NOTE—The superintendence of this line has been in the hands of the resident architect at Victoria since October, 1901, when the arrangement theretofore in operation with the C. P. Ry. Co. was terminated.
1	Victoria.....	0	E. Houghton, oper. (C.P. Tel.).	200 00	Nov. 1, 1891	Proportion of salary.
	Sooke.....	18	Percy Clark, line repairer.....	540 00	Dec. 1, 1903	
2	*Otter Point.....	8	E. Gordon, agent and operator.	720 00	" 1, 1891	Allowance of $7.50 horse hire when necessary to come to Victoria repairing line.
3	*Jordan River (Shirley)..	10	E. Clark	540 00	" 1, 1903	During winter months only.
4	Port San Juan (Port Renfrew).	30	E. C. Williams.....	240 00	Sept. 22, 1903	
			J. W. Williams, repairer	520 00	May 1, 1905	
5	Carmanah Lighthouse.....	24	W. P. Daykin, repairer.....	240 00	Nov. 1, 1891	
	(Clo-oose 2 miles west		D. Logan, repairer.	540 00	April 1, 1898	
			R. S. Daykin. repairer.	540 00	June 1, 1905	
6	Cape Beale.....	28	M. Patterson, agent & operator	120 00	Sept. 1, 1899	
	Totals.....	118		3,660 00		

* Telephone connections for the convenience of several firms in the neighbourhood have been established at *Jordan River* for Messrs. Bell, Irving & Co., Point-no-Point; The B. C. Packer's Asso., Point-no-Point and Jordan River; Capital City Canning Co., French's Ranch; J. H. Todd & Co., Coal Creek; 5 connections, rent paid $12 each for a canning season. At *Otter Point* for Messrs. J. H. Todd & Son, The B. C. Packers's Asso., Capital City Canning Co. and the B. C. Mess.; one connection in common at Sooke Wharf, $12 for the season.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

BRITISH COLUMBIA—*Continued.*

No.	Stations.	Intermediate Distance.	Agents, &c.	Positions.	Salaries per Annum.	Date of Appointment.	Memo.
	Nanaimo-Comox.	Miles.			$ cts.		
1	Nanaimo	0	W. F. Archibald.	Agent and operator..	306 00	Mar. 1, 1896	The amount comprises $20 per month for agency and operation, $3 for messenger service and $2.50 for battery care.
			A. E. Booth, joint with C.P.R.	Assistant operator...	120 00	June 1, 1902	
2	Wellington	5	E. & N. Ry. Co...	Agent and operator..	Commiss.	April 1, 1893	
3	Parksville	23	Mrs. R. Williams	" " ..	360 00	Dec. 1, 1897	
			W. Mills	Lineman	360 00	June 1, 1903	Parksville, Quellicum section.
4	Union Bay	32¼	Miss E. McDonald	Agent and operator..	360 00	" 3, 1898	
			Thos. Hudson...	Lineman..... ...	780 00	Nov. 17, 1898	
5	Union Mines	... ...	J. Dunsmuir.....	Accommodat'n office.	....	....	See mention of this in boby of report (1897-98).
6	Cumberland	10	Albert Peacy.....	Agent and operator	120 00 com. 25 p.c....	Apr. 28, 1898	
7	Courtney	7	J. McPhee & Son.	Telephone Agent....	com. 25 p.c.	.....	Courtney and Comox communicate by telephone at prearranged intervals.
8	Comox	7¾	M. McDonald	Agent and operator..	360 00	Nov. 1, 1895	
	Totals	81			2,766 00		
	Parksville, Alberni and Cape Beale Line.						NOTE—The repairs of this line has been done jointly with the Can. Pac. Telegraph since December 1, 1902.
	Parksville	0	(See above).				
	Alberni	29½	Mrs. P. A. Haslam	Agent and operator..	240 00	Oct. 1, 1899	Proportion of salary for Comox line included.
1	Bamfield Creek	53	Can. Pac. Tel....	....	com. 50 p.c.	Dec. 1, 1902	
2	Cape Beale	4	M. Patterson.	Agent and operator..	240 00	May 1, 1900	Proportion of salary for this line.
		86½			480 00		

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

BRITISH COLUMBIA—*Continued.*

No.	Stations.	Intermediate Distance.	Agents, &c.	Positions.	Salaries per Annum.	Date of Appointment.	Memo.
	Alberni-Clayoquot Line.				$ cts.		
1	Alberni	0	P. O. Haslam	Agent and operator.	120 00	Dec. 1, 1902.	Proportion for this line.
2	New Alberni	2	E. A. Waterhouse	"	Com. 25 p.c	Oct. 1, 1903.	
	Franklin Creek ½ mile cable.	8					Line crosses canal at this point by submarine cable.
3	Uchucklesit*	10	E. B. Girard	Agent lineman	660 00	Oct. 1, 1902.	Section extends from Franklin Creek to Pipestem Inlet; post office address, New Alberni.
4	Ucluelet	10¼	W. L. Thompson H. J. Hillier	" Lineman	720 00 780 00	Dec. 1, 1902. " 1, 1902.	
5	Clayoquot	66¼	E. S. Reeve	Agent lineman	720 00	" 1, 1902.	
	Stubbs' Island			Accommodati'n office			Private cable connection for local firm.
	Totals	96¾			3,000 00		
	Golden-Windermere Line.						
1	Wilmer	0	R. A. Power	Agent and lineman	780 00	Jan. 1, 1902.	
2	Athalmer	5	Teleph. connection				Operated from Windermere, Wilmer and Spillimacheen.
3	Windermere	5	"	G. C. Pitts		July 1, 1904.	" Spillimacheen and Athalmer.
4	Spillimacheen	16	W. F. Dunn Teleph. connection	Agent and lineman	900 00	Jan. 1, 1902.	Local superintendency. Operated from Windermere, Willmer and Athalmer.
5	Golden	66	W. A. Decow	Agent and operator.	480 00	Dec. 1, 1904.	Joint agent with C. P. Tel.
	Totals	92			2,160 00		

*Telephone connection between this office and premises of the Nathmint Mining Company.

GOVERNMENT TELEGRAPH SERVICE—*Concluded.*

BRITISH COLUMBIA—*Concluded.*

No.	Stations.	Intermediate Distance.	Agents and Operators.	Salaries per Annum.	Date of Appointment.	Memo.
	Vancouver-Salt Springs Line.					
1	Duncan Station	9	E. Castley	Commission 25 p.c.	July 1, 1905	
2	Maple Bay	3	T. Aitken	" 25 p.c.	" 1, 1905	
3	Chisholms	¾	A. Chisholm	" 25 p.c.	" 1, 1905	
4	Edwards' Store	3	Edwards & Co	" 25 p.c.	Mar. 1, 1902	
5	Ganges Harbour	9	E. Purvis	" 25 p.c.	July 1, 1905	
	Totals	24¾				

There have been no staff appointments on this line, it being worked by telephone for the present merely for general convenience and looked after by the persons directly interested.

GOVERNMENT TELEGRAPH SERVICE.

YUKON LINES.

NAMES of employees and monthly salaries, &c., Yukon Telegraph Service, which includes Port Simpson, Barkerville, Quesnelle and Lillooet branches.

Number.	Stations.	Intermediate Distance.	Positions.	Salaries per Month.	Tariff.	Night Rate.
				$ cts.		
			C. E. Gooding, manager	60 00		
			H. B. Rochester, operator	42 00		
			C. Bellean, operator	42 00		
1	Ashcroft		M. A. Armstrong, operator	39 00		
			J. D. Fraser, lineman	75 00		
			R. P. Quain, clerk	83 60		
	Cache Creek	4	Accommodation office	50 p. c. com.	25 and 2	25 and 1
2	Bonaparte	3½	" "	"	25 " 2	25 " 1
3	Pavillon *	36½	Mrs. Bryson	"	50 " 3	25 " 1
4	Lillooet	22	S. A. McFarlane, agt. & lineman.	60 00	50 " 3	25 " 1
5	Clinton	33	E. LeBourdais, opr. and lineman.	60 00	25 " 2	25 " 1
6	115 Mile House	55	D. M. LeBourdais "	60 00	25 " 2	25 " 1
7	150 "	35	J. Taylor, operator	60 00	50 " 3	30 " 2
8	Harpers Camp †	33	S. H. Patenaud, opr. and lineman	60 00	50 " 3	30 " 2
9	Bullion †	27				
10	Quesnelle Forks ‡	4	O. Landry, operator and lineman.	66 66	50 " 3	30 " 2
11	Soda Creek	28½	C. H. Smith " "	60 00	50 " 3	30 " 2
12	Alexandria	21	G. A. Broughton " "	60 00	50 " 3	30 " 2
13	Quesnelle	33	T. F. Murphy " "	75 00	50 " 3	30 " 2
14	Lafontaine‡	46	Cariboo Consolidated Co	50 p. c. com.	50 " 3	
15	Barkerville‡	15	J. Stone, operator and lineman	60 00	50 " 3	
16	Blackwater & Fraser Lake	42	G. Duclos, lineman	70 00		
			J. H. Waller, operator	75 00	75 " 5	
17	Bobtail Lake	37	J. W. Howison	75 00	75 " 5	
			W. Smith, lineman	70 00		
18	Stoney Creek	32	W. J. Milne, operator	75 00	75 " 5	
			J. D. Charleson, lineman	70 00		
19	Fraser Lake	21	G. W. Proctor, operator	75 00	75 " 5	
			M. McNevin, lineman	70 00		
20	Burns Lake	55	W. Heinz, operator	75 00		
			J. E. Wise, lineman	70 00	100 " 7	
21	South Bulkley	27	E. Barrett, lineman	70 00	100 " 7	
			J. A. Hodder, operator	75 00		
22	North Bulkley					
23	Bulkley Ranch	52	H. N. Boss, operator	75 00	125 " 10	
			H. Fink, lineman	70 00	125 " 10	
24	Morricetown					
25	Hazleton	50	G. M. Swan, operator	100 00	125 " 10	
			E. R. Cox "	100 00		
			E. E. Charleson, line foreman	150 00		
			J. C. K. Seely, lineman	75 00		
			F. Charleson, lineman	70 00		
26	Meanskinisht§	35	E. Tomlinson, operator	50 00	125 " 10	
			R. Tomlinson, lineman	75 00		
27	Skeena Canyon§	47	J. W. Graham, operator	75 00		
			C. Durham, lineman	70 00		
28	Lorne Creek§	24	J. D. McIntosh, operator	75 00		
29	Grave Yard Pt.§		W. S Dobbie, "	75 00	150 " 10	
			A. E. Johnston, lineman	70 00		
30	Telegraph Point§	53	W. J. O'Neill, operator	75 00		
			W. R. Flewin, lineman	70 00	150 " 10	
31	Aberdeen§	4½	A. Lafontaine	75 00		
			R. Donaldson, lineman	70 00		
32	Port Simpson§	39	M. W. O'Neil, operator	50 00		
33	1st Cabin	27	H. A, Cullon "	75 00		
			Hugh Taylor, lineman	70 00		
34	2nd Cabin	22	G. T. Carpenter, operator	75 00		
			W. Loiselle, lineman	70 00		

* Branch from Ashcroft † 150 Mile House. ‡ Qnesnelle. § Hazelton.

GOVERNMENT TELEGRAPH SERVICE—*Continued.*

NAMES of employees and monthly salaries, &c., Yukon Telegraph Service, &c.—*Con.*

YUKON LINES—*Continued.*

Number.	Stations.	Intermediate Distance.	Positions.	Salaries per Month.	Tariff.	Night Rate.
				$ cts.		
35	3rd Cabin	25	W. J. Tonvie, operator	75 00		
36	4th Cabin	20	P. Burnell, "	75 00		
37	5th Cabin	20	E. A. Hawley, "	100 00		
			C. Jepson, lineman	$3 per day		
38	6th Cabin	20	G. T. Brown, operator	100 00		
39	7th Cabin	19	T. E. Harkin.	100 00		
40	8th Cabin	19	Jas. Mooney.	100 00		
			L. Dubois, lineman	$3 per day		
41	9th Cabin	17	J. Muir, operator	100 00		
			G. Hill, lineman	$3 per day		
42	Echo Lake	32	F. N. Jackson, operator	100 00		
			J. Lowery, lineman	$3 per day		
43	25-Mile Cabin	25	J. H. Murie, operator	100 00		
			J. W. Hovey, lineman	$3 per day		
44	Iskoot	16	J. W. Watts operator	100 00	175 "	10
			W. Warnock, lineman	$3 per day		
45	Telegraph Creek	61	A. S. Gillespie, operator	100 00		
			W. S. Simpson, lineman	175 00		
			A. J. Charleson, line foreman	50 00		
46	Shesley	45	W. P. Ball, operator	82 50		
			Geo. E. Adsit, linemen	75 00		
47	Nahlin	61	S. G. Lawrence, operator	82 50	200 "	15
			R. McKay, lineman	75 00		
48	Nakina	49	Geo. Coutts, operator	82 50		
			J. Haston, lineman	75 00		
49	Pike River	40	R. J. Barton, lineman & operat.	82 50		
50	Atlin	23	F. W. Dowling, circuit manager	116 66		
			A. B. Taylor.,	100 00		
			D. H. Gagné, line foreman	75 00		
51	Center Cabin	35			225 "	15
52	Tagish	40	M. Grimes, operator	82 50		
			Adam Dickson, lineman	75 00		
			Gastin Aish "	75 00		
53	Carcross	18	S. E. Chambers, operator	82 50		
54	White Horse	65		175 00	250 "	15
			H. Gilchen, actg. supt.	150 00		
			J. P. Champagne, clerk	112 50		
			G. S. Flemming "	115 00		
			G. Henderson, lineman	75 00		
			Wm. Watson, messenger	25 00		
			T. Wakamoto, housekpr & cook	75 00		
55	Lower LeBerge	59	Douglas Potts, operator	82 50		
56	Hootalinqua	30	W. Peters, operator	82 50		
57	Big Salmon	34	H. O. Lokken, lineman	75 00		
58	Tantalus	30	R. Daoust, operator	82 50		
59	Five Fingers		R. O. Freeman, operator	82 50		
60	Yukon Crossing	8	Aubry Tennant, operator	82 50		
			K. Smith, lineman	75 00	275 "	75
61	Fort Selkirk	50	Bruce Watson, operator	82 50		
62	Selwyn	30	R. P. Hall, operator	82 50		
			N. Wade, lineman	75 00		
63	Stewart River	75	Chas. N. Graham, operator	82 50		
64	Ogilvie	23	J. W. Wilkinson "	82 50	300 "	20
65	Dawson	48	W. Brownlow, manager	150 00		
			G. A. McLachlin, operator	125 00		
			F. A. Hanley, operator	125 00		
			A. B. Clegg, operator	125 00		
			H. Douglas, jr., messenger	$3 per day		
			Mrs. D. Hunt, housekpr & cook	100 00		
			Jas. McMenamin, lineman	80 00		
			C. A. Couture. line foreman	125 00		
66	Forty Mile	55	W. H. Mullin, operator	82 50		
67	Boundary	40			325 "	
	Total	2,252½				

GOVERNMENT TELEGRAPH SERVICE—*Concluded.*

NAMES of employees and monthly salaries, &c., Yukon Telegraph Service, &c.—*Con*

YUKON LINES—*Concluded.*

Number.	Stations.	Interm'diate Distance.	Positions.	Salaries per Month.	Tariff.	Night Rate
				$ cts.		
..	Vancouver	.....	J. T. Phelan, acting supt	175 00		
		.....	J. J. Healy, clerk	140 00		
		.....	Emma Keays, stenographer.....	65 00		

YUKON TARIFFS.

The rates given above for points north of Quesnelle are one-third less than those primarily adopted, which were calculated on the general basis of 50 cents for 100 miles and 25 cents for each additional 100 miles, counting the distance from Ashcroft.

The local rates between offices north of Quesnelle are calculated on the basis of 50 cents for 100 miles and 25 cents for each additional 100 miles, and the local rates between offices north of Atlin are fixed at 50 cents for each 100 miles.

Cable Messages.—On transatlantic business the word rate is twice as much as the additional word rate given in the list for all points north of Ashcroft—Barkerville, $3 \times 2 = 6$c.; Dawson, $20 \times 2 = 40$c. per word.

On transatlantic business the word rate is the additional word rate plus 4c.; Barkerville, $3 + 4 = 7$c.; Dawson, $20 + 4 = 24$c. per word to or from Ashcroft.

Press Despatches.—For the Yukon line the rate is 1 cent per word, minimum charge, $1; this applies to the whole line. Exception, Barkerville-Ashcroft section (local) minimum charge, 50 cents.

Yukon system connects at Boundary with U.S. Sig, Service Telegraph System.

GOVERNMENT TELEGRAPH LINES.

SPECIAL TARIFF.

Cable messages.—Rates for cable messages passing over the Yukon line will be found in connection with the Yukon tariff in the preceding pages.

Elsewhere, the rate for transatlantic messages passing over the government lines is the same as for ordinary through messages, excepting where the ordinary tariff is more than 25 cents; in such cases the government line rate is 4 cents per word, with a minimum charge of 25 cents. For example:—

For a message of six words or less the charge is 25 cents for government line.

For a message of seven words the charge is (7 x 4) 28 cents for government line.

For a message of twelve words the charge is (12 x 4) 48 cents for government line.

In every case the counting of words includes the address and signature in the same way as for transatlantic cable tolls.

Press despatches.—The rate for press despatches on the government lines (excepting the Yukon line), is 20 cents per 100 words; no single message less than 20 cents.

For the Yukon line the rate is 1 cent per word, minimum charge $1; this applies to the whole line. Exception, Barkerville-Ashcroft section (local) minimum charge 50 cents.

REGULAR TARIFF.

NOVA SCOTIA.

Line from North Sydney to Meat Cove and Mabou—Local rate, 25-1 (20 offices).*

Big Bras d'Or	Through rate 15-1 from North Sydney, W. U. office.		
New Campbellton's (Kelly's Cove)	"	"	"
Englishtown	"	"	"
Baddeck	"	"	"
Murray	"	"	"
Indian Brook	"	"	"
French River	"	"	"
South Ingonish	"	"	"
Ingonish	"	"	"
Neil's Harbour	"	"	"
Dingwall	"	"	"
Aspy Bay	"	"	"
Meat Cove	"	"	"
Pleasant Bay	"	"	"
Cheticamp	"	"	"
Grand Etang	"	"	"
Northeast Margaree	"	"	"
Margaree Harbour	"	"	"
Southwest Margaree	"	"	"
Inverness Town (Broad Cove)	"	"	"

Night messages are exchanged with the Western Union Telegraph Company for offices on this line. Rate, 1 cent per word with minimum of 15 cents. The local night rate is 1 cent per word with minimum of 25 cents.

Line from Barrington to Cape Sable—Local rate, 12-1.

Newellton	Through rate 12-1 from Barrington, W. U. office.		
Cape Sable Lighthouse	"	"	"

This line is now operated by the local telephone company. Terms of lease provide for former telegraph rate as above not being exceeded.

NEW BRUNSWICK.

Line from Chatham to Point Escuminac—Local rate 25-1 (4 offices).

Bay du Vin	Through rate 15-1 from Chatham, G. N. W. office.		
Lower Hardwicke	"	"	"
Escuminac	"	"	"
Pt. Escuminac Lt. House	"	"	"

* When the tariff rate is entered as 25-1 or 50-2, &c., the meaning is that the rate is 25 cents or 50 cents for ten words and 1 cent or 2 cents for each additional word.

Line from Eastport, Me., to Campobello, Grand Manan, and Whitehead Islands (9 offices)—Local rates between offices on Grand Manan and Whitehead Islands, 15-1; Grand Manan and Campobello Island, 25-2; The Islands and Eastport, Me., 25-2, W. U. O.

Welchpool, Campobello	Through rate 25-2 from	Eastport, Me.,	W. U. office.
Flagg's Cove, Grand Manan	"	"	"
Castalia	"	"	"
Woodward's Cove	"	"	"
Grand Harbour	"	"	"
Seal Cove	"	"	"
Southern Head	"	"	"
Cheney's Head	"	"	"
Whitehead Islands	"	"	"

QUEBEC.

Line from Gaspé to Anticosti Island, Q. (9 offices)—Local rates between offices on the Island, 25-1; Gaspé and the Island offices, 50-2.

South-West Point	Through rate 50-2 from	Gaspé, G. N. W.	office.
Salt Lake	"	"	"
Shallop Creek	"	"	"
South Point	"	"	"
Heath Point	"	"	"
Fox Bay	"	"	"
Becscie River	"	"	"
West Point	"	"	"
English Bay	"	"	"

Line from Meat Cove, C.B., N.S., to Magdalen Islands, Q (9 offices)—Local rates between offices on the Islands, 25-1; Meat Cove and the Islands, 50-2; offices on the Meat Cove line and the Islands, 50-2.

Amherst Island	Through rate 50-2 from	North Sydney, W. U.	office.
Amherst Lt. House	"	"	"
Etang du Nord Village	"	"	"
Etang du Nord Lt. House	"	"	"
Cap aux Meules (Grindstone)	"	"	"
House Harbour	"	"	"
Grosse Isle	"	"	"
Grand Entry	"	"	"
South Beach	"	"	"
Bryon Island	"	"	"

Line from Meat Cove, C.B., N.S., to St. Paul's Island—Local rate between offices on Meat Cove line and St. Paul's, 50-2 (1 office).

St. Paul's Island Lt. House, 50-2 from North Sydney, N.S., W. U. office.

Line from Quebec to Grosse Isle Quarantine Station (7 offices)—Local rates between offices on Orleans Island and Isle Réaux, 15-1; on Orleans Island, Isle Réaux and Quebec, 15-1; on Orleans Island and Grosse Isle, 25-1; on Isle Réaux and Grosse Isle, 15-1.

St. Pierre, Orleans Island	Through rate 15-1 from	Quebec,	G. N. W. office.
Ste. Pétronille	"	"	"
St. Laurent	"	"	"
St. Jean	"	"	"
St. Famille	"	"	"
St. François	"	"	"
Isle Réaux	"	"	"
Grosse Isle	" 25-1	"	"

Lines in Chicoutimi District, including points west of Bersimis.—Local rate between offices within 100 miles apart, 15-1; over 100 miles, 25-1. Between offices on government line and offices on the G. N. W. Company's line as far as and including Quebec, 25-2. Through rate is the above mentioned local rate between government line offices, to connect with the G. N. W. Tel., plus the full charges of the G. N. W. Tel. Co., for points beyond Quebec.

Line from Bersimis to Chateau Bay, with branch to Anticosti from Long Point of Mingan.—Local rate between offices within 100 miles apart, 15-1; over 100 miles, 25-1; on mainland and Anticosti, 50-2. These same rates apply to government line offices east and west of Bersimis.

The checking of all through business exchanged with the G. N. W. Tel. Co. is done with Quebec.

ONTARIO.

Line from Leamington to Pelee Island (Telephone Circuit)—Local rates between Leamington and Point Pelee, 15-1; mainland and Island offices, 25-1; offices on the Island, 15-1 (8 offices).

Gun Club House, mainland	15-1 (through business) from	Leamington,	G. N. W.
Point Pelee, mainland	"	"	"
Leamington Dock	"	"	"
Bairds	"	"	"
North Pt. Lt. House, Pelee Id.	"	"	"
North Dock, Pelee Island	"	"	"
McIntyre's Corners	"	"	"
West Dock, Pelee Island	"	"	"
South Dock	"	"	"

NORTHWEST TERRITORIES.

Line from Qu'Appelle (C.P.R. Sta.) to Edmonton, Alberta—Local rates, 15-1, 25-2, 50-3, for distances 10 to 600 miles (13 offices.)

Fort Qu'Appelle	25-2 Qu'Appelle or	Saskatoon.
Touchwood	"	"
Saskatoon	"	"
Saskatoon (T's. office C.P.R. Tel.)	"	"
Henrietta	"	"
Battleford	"	"

Bresaylor	25-2 Saskatoon;	50-3 Qu'Appelle or Edmonton.
Onion Lake	"	"
Moose	"	"
St. Paul de Métis	50-3 Saskatoon,	Qu'Appelle or Edmonton.
Saddle Lake	"	"
Victoria	25-2 Edmonton;	50-3 Qu'Appelle or Saskatoon.
Andrew	"	"
Star	"	"
Fort Saskatchewan	"	"
Edmonton (Transfer office C.P.R. Tel.)	"	"
Athabasca Landing	"	"

Line from Moosejaw (C. P. Stn.) to Wood Mountain—Local rates, 25-2 (1 office).

Wood Mountain..25-2 from Moosejaw.

BRITISH COLUMBIA.

Line from Victoria to Cape Beale—Local rate, 50-3 (6 offices).

Sooke	50-3 from Victoria C. P. R. Tel. office.	
Otter Point	"	"
Jordan River	"	"
Port San Juan	"	"
Carmanah Lt. House	"	"
Cape Beale	"	"

Line from Nanaimo to Comox—Local rate, 25-2 (9 offices).

Wellington (C.P.R. & E. & N. Ry.)	25-2 from Nanaimo	
Parksville	"	or Wellington.
Fanny Bay	"	"
Cumberland	"	"
Union Bay	"	"
Union Mines	"	"
Courtney	"	"
Comox	"	"
Alberni (branch)	"	"

Line from Alberni to Cape Beale—Local rate, 50-3.

Between offices on the Victoria-Cape Beale line and the Nanaimo-Comox line, via Alberni, 50-3.

Line from Golden to Windermere—Local rate, 25-2 (3 offices).

1. Athalmer	25-2 from Golden (C. P. Ry.).	
2. Wilmer	"	
3. Windermere	"	

Line from Kamloops to Lower Nicola (Telephone) (16 offices).

Connections are leased and lessees allowed commission on messages of non-subscribers. Tariff, 25-2 local from Kamloops, and for conversations, 25 cents for five minutes, half that rate for each additional five minutes or fraction thereof.

Yukon System.

Tariff rates for the Yukon lines are given in the table of staff, &c., in the foregoing pages.

SUMMARY.

Offices on government line, as listed	327
Offices at transfer points with connecting lines	16
Total number embraced by the service	343

APPENDICES

GOVERNMENT TELEGRAPH SERVICE

ANNUAL REPORT FOR 1906-7.

Sectional reference (1) Cape Breton lines.
(2) Anticosti Island lines.
(3) Bay of Fundy lines.
(4) North Shore, St. Lawrence and Chicoutimi.
(5) Quarantine Telegraph system.
(6) Pelee Island system.
(7) Northwest lines.
(8) British Columbia lines.
(9) Kamloops-Penticton lines.
(10) Yukon telegraphs.
(11) Report of Inspector, Yukon telegraphs.
(12) Cable ship *Tyrian*.

REPORT No. 1.

St. John, N.B., October 11, 1907.

D. H. Keeley, Esq.,
General Superintendent, Government Telegraph Service,
Ottawa, Ont.

Dear Sir,—I beg to submit the following report upon the Government telegraph lines in Cape Breton, for the year ended March 31, 1907.—

—	Miles in Operation.	No. of Offices.	No. of Operators.	No. Reprs. and Linemen.
Meat Cove	176¾	18	18	7
Mabou-Meat Cove	109	8	8	11
Mabou-Hawkesbury and North Sydney	202½	16	16	3
Boularderie-Eskasoni	92	15	15	6
St. Paul	3	1	1	....
	583¼	58	58	27

The line between Meat Cove and Ingonish is in bad condition. The poles, which are of native wood, are so weak that it becomes necessary to renew that section entire. It is also necessary to strengthen the section between North Sydney and Bras d'Or, with a proportion of new poles. The remaining lines are reported in fair condition, merely requiring the usual general repairs, consisting of resetting and straightening the poles, trimming trees, renewing insulators, &c.

Tenders have been given out for new poles for the section first named, and it is expected the work will be taken in hand before winter sets in.

The cable crossing the Big Bras d'Or, which failed February 28, was restored April 18. During this interruption business for points on the Meat Cove line, north of Englishtown, was relayed via Hawkesbury.

CONSTRUCTION OF NEW LINES.

The new line constructed last year on Boularderie Island was extended into North Sydney, on the poles of the Meat Cove line; distance six miles. This line, together with that from North Sydney to Castle Bay, Eskasoni, has been opened up for traffic during the present year, adding some 72 miles of line and 13 offices to the Cape Breton system.

NEW OFFICES AND OFFICE CHANGES.

The repeating station for the Magdalen Islands and St. Paul's was removed from Meat Cove to Bay St. Lawrence, September 1, 1906. On May 1, 1907, Mr. Vilbon Theriault was appointed to the charge of this station, Mrs. M. J. McNeil retiring.

The station at Meat Cove remained closed until May 18, 1907, when it was re-opened as a local office, with Miss E. Dawson in charge as operator, at $50 per annum or commission.

CHETICAMP LINES.

Strathlorne office was closed January 13, 1907. At Inverness, Miss Agnes A. Gillis, agent-operator (50 per cent of receipts and checks), retired March 17, and Miss Helen C. McLean was appointed to this station temporarily, receiving the total receipts and checks. No permanent appointment has, up to the present, been made.

BOULARDERIE LINE.

1906.—New offices were opened as follows, viz.:—
Little Bras d'Or, December 1, in charge of Edna Grantmyer, agent-operator.
Alder Point, December 1, in charge of Mrs. J. Arsenault, agent-operator.
Groves Point, December 1, in charge of Mary Dunlap, agent-operator.
Point Clear, December 1, in charge of Mrs. M. McLeod, agent-operator.
S. Side Boularderie, January 1, 1907, in charge of Donald McRae, agent-operator.
Boularderie West, January 1, 1907, in charge of John McIntyre, agent-operator.
Hillside, February 1, 1907, in charge of Christina McKenzie, agent-operator.

ESKASONI LINE.

French Vale, opened February 14, 1907, Jas. J. McLean, agent-operator.
Gillis Lake, opened February 12, 1907, D. H. Gillis, agent-operator.
East Bay, opened February 13, 1907, M. L. McNeil, agent-operator.
N. Side East Bay, opened February 15, 1907, Jas. J. Gillis, agent-operator.
Castle Bay, January, 1907, Maria McDonald, agent-operator.
All on a basis of $50 per annum or commission.

A new office was also opened at St. Esprit, on the North Sydney-Port Hawkesbury section, September 1, 1906, Mrs. John D. Morrison, agent-operator. $50 per annum or commission.

LOCAL REPAIR SECTIONS.

Appointments of local linemen were made dating from June 1, 1907, at $50 per year each, as under:—

Alder Point Loop, from Little Bras d'Or—Capt. John Arsenault, Alder Point.

Big Bras d'Or—Upper Kempt Head—J. A. C. McKenzie, Boularderie Centre.

Little Bras d'Or—Upper Kempt Head—R. R. McKenzie, Councillor, South Side Boularderie.

North Sydney—Gillis Lake—Angus J. McLean, McLeanville.

Gillis Lake—Eskasoni—Duncan Gillis, North Side East Bay.

A detailed statement of offices, employees and pay lists as at June 30, 1907, is attached.

Respectfully submitted,

D. C. DAWSON,

Superintendent.

REPORT No. 2.

West Point, Anticosti, July 10, 1907.

D. H. Keeley, Esq.,
General Superintendent, Government Telegraph Service,
Ottawa.

Sir,—I beg leave to submit herewith my report on the Government telegraph service under my charge for the past eight months, viz., from November 1, 1906, up to June 30, 1907, as requested by your telegram of the 9th instant.

I am pleased to state that our line is in good working order on its whole length, and when the general repairs now proceeding are finished, the line will be in perfect order.

We have 230 miles of line in operation, which on its whole extent is very hard to keep in good order, exposed as it is to heavy winds, ice and bushes. The repairs are also hard to make owing to want of roads. The travelling (always on foot) is very bad, and made worse and most dangerous by the many rivers that repairers have to cross. Therefore, repairs are generally costly.

As new wire had been put on the whole length of our line two years ago, there was no expense made for reconstruction of line. Likewise no expense on improvements nor for the building or repairing of camps, which were all repaired and renewed last season.

Maintenance of the line during the past eight months amounts to $237.48, but this comprises the painting of government houses and boats, landing and carting of general supplies, freight of same, postage, travelling expenses of substitute operator when service requires him, riggings for general repairer's boat, and all the repairs on the line made by local repairers. As the general repairs are not yet finished, I cannot include amount here, but as a rule they generally cost from $225 to $240.

I will here beg leave to suggest that the telegraph poles from English Bay down to North Shore cable should be renewed, as they are in a decayed state (they are spruce poles), and a number break down at every breeze. This reconstruction could be done next season, and spruce poles could be had here on the island at a reasonable figure, I think. Cedar poles would be preferable of course.

We are also in want of several canoes for the rivers, and they could be built here this season if you authorize me to have them.

The whole humbly submitted.

I have the honour to be, sir,

Your obedient servant,

ALF. MALOUIN.

REPORT No. 3.

North Head, N.B., October 12, 1907.

D. H. Keeley, Esq.,
General Superintendent, Government Telegraph Service,
Ottawa.

Dear Sir,—Complying with your telegram, am sending the following report on the condition of the telegraph lines in this district, for the last year.

Toward the latter part of February last, the cable suddenly gave out, and communication was entirely interrupted until May 24, 1907, when it was again restored by the under-running of a new cable from Long Eddy, up to within half a mile of the cable landing at Herring Cove, on Campobello, where the new cable not being of sufficient length to reach to shore, was spliced to the other, which short piece appeared to be in pretty good condition. The break in the old cable was found about half a mile off the Grand Manan shore. With the exception of one or two interruptions, caused by the swinging of other wires, in Eastport, the line has been giving good satisfaction since, and all its land connections are in good condition.

Respecting the lines on Grand Manan, can say that they are in good order. The line from Seal Cove to Southern Head has been working poorly this spring, a faulty connection in the midway station at Deep Cove being the cause.

The White Head telephone line, too, had not been giving perfect satisfaction. I went over that line in September, making a few slight changes in the manner of connections which had formerly been made outside the cable boxes, where being exposed to the weather they became corroded, so that in a short time they were rendered worthless.

During October, November and December, the Grand Manan line worked very badly, owing to trouble caused by the Telephone Company putting their wires on our poles; but have had good service since.

The Grand Manan Telephone Company obtained permission from the department to place their wires on our poles, and while the work was going on, they threw our wires from the insulators and caused a great deal of trouble and inconvenience.

There has been no change in the staff, and everything seems in a satisfactory condition. No new construction and not much extra work done.

Yours very truly,

CLARA C. SEELY,
District Superintendent.

REPORT No. 4.

CHICOUTIMI OFFICE.

Report of the district superintendent from Quebec to Bersimis, in the counties of Quebec, Montmorency, Charlevoix, Chicoutimi, and part of Saguenay to Bersimis, for the nine months ending March 31, 1907.

Line No. 13.—From Quebec to Labrador. As special report No. 1, 1905-6.

Lines 13 and 21; Line No. 21.—Double line from Malbaie to Ste. Catherine, 38 miles. Same as report No. 1, except that the Sault au Mouton's office was completed for operations.

Line No. 40.—From Baie St. Paul to Chicoutimi, 85 miles. Same as report No. 1, except that Mrs. C. Levesque, of St. Alphonse, whose salary was increased from $50 to $150; operator D. Villeneuve was also increased by $120, from $480 to $600.

Line No. 39.—From St. Catherine to Chicoutimi, 83 miles. Same as report No. 1, except that at Chicoutimi's office two new operators were appointed, for day and the other for night work.

Line No. 41.—From Malbaie to St. Agnes, 12 miles. Same as report No. 1, except that at Guay instead of operator S. Bouchard it is Jos. Demeules.

Line No. 44.—From Baie St. Paul to Petite Rivière St. Frs. Xavier. Same as report No. 1.

Line No. 45.—From Ste. Anne to Lac Clair, 10 miles. Same as report No. 1, 1905-6.

Line No. 42.—From Chicoutimi to St. Charles Borromée, 18 miles, with two loop lines, Shipshaw North, 2 miles, and St. Ambroise, 4 miles. Same as report No. 1, 1905-6, except at Chicoutimi, G. N. D. Villeneuve, $600, instead of $480.

Line No. 50.—From Tadousac to Chicoutimi, 82 miles. Same as report No. 1, salary of operator Villeneuve to change from $480 to $600.

As to line repairers, there is no change from report No. 1, 1905-6.

The construction of a line from Baie St. Paul to Murray Bay by St. Hilarion:	
Amount expended	$1,048 26
Paid for right of way for our line in the municipality of Canton Tremblay	300 00
Services of the notary	25 00
Construction of a building at Bersimis—	
Contract	3,025 00
Extra work	434 00
Repairs were made to St. Félix d'Otis' bridge	199 96
Materials were bought to repair the Sault au Mouton bridge	306 00
The construction of a camp at Islet a Jérémie, North Shore	210 24
Two camps were built between La Descente des Femmes to Sacré Cœur	28 50
A sum of $401.94 was expended between St. Alphonse and Chicoutimi in view of improving the line	401 94
The amount of $151.12 was expended in pulling down the telephone line on the Ste. Agnes line	151 12

A sum of $86.50 was paid to Mr. Eug. Caron, of Tadousac, for repeating the messages and care of battery from February 1, 1906, to January 31, 1907. Mr. Caron is now on the regular pay-roll		$ 86 50
The roadway between Baie St. Paul and St. Alexis was repaired. A sum of $801.92 was expended		801 92
North Shore repairs to roadway—		
West of Esquimaux	$297 50	
East of Esquimaux	402 50	
St. Firmin	199 97	
Seven Islands	301 50	
Making a total of		1,201 47
An account of $62.49 was sent to Ottawa for Mr. P. Guay's services at Bersimis from May 1 to June 15, 1907		62 49
A sum of $447.07 was expended for the construction of a line from Baie St. Paul village to the wharf to connect with the cable to Isles aux Coudres		447 07
Paid to Diver Fortin for services		37 00
The sum of $573.99 was expended in connection with the line from Bergeronnes westward with the line going southward from Sacré Cœur to Tadousac		573 99
Paid for general repairs in connection with the maintenance of the line between Portneuf and Escoumains, and also at Pointe au Bouleau		377 44
Materials bought for maintenance—		
One set of repeaters for Chicoutimi's office		64 65
Sulphate of copper		220 50
Making a total sum of		$15,988 13

I have the honour to be, sir,

Your obedient servant,

J. C. TACHE.

REPORT No. 5.

St. Jean, P.Q., October 9, 1907.

D. H. Keeley, Esq.,
General Superintendent, Government Telegraph Service,
Ottawa.

Sir,—I beg to submit the report of the operations of the land and cable lines under my charge, for the fiscal year ended March 31, 1907.

These lines cover a distance of 39 miles, from St. Pierre, I.O., to the Quarantine, at Grosse Isle, including the loop from St. Jean to Ste. Famille, with an extension (loop) four miles in length from the village of St. François northward, including Mr. Pierre Labbe's office, a telephone cable of 3½ knots from Crane Island to Montmagny, and a telegraph cable of 30 knots from St. François to Baie St. Paul.

On account of the extraordinary cold weather during the winter of 1906-7, all the submarine cables under my control have been broken by the ice. There were interruptions of the cable lines, as follows:—St. François and l'Ile aux Reaux, January, 1907; Baie St. Paul, February, 1907; Crane Island, December, 1906; Ile aux Coudres, December, 1906. In May last repairs were made as soon as possible to the Quarantine

cables, the work being done with great difficulty on account of the frequent heavy easterly gales during that month.

I would suggest that huts should be constructed at the cable landings, at L'Ange Gardien and St. Pierre, I.O. Those huts would be convenient during the testing of the cables, and also would be a good shelter from bad weather for the repairers, who could thus dispense with boats and save expense.

As in previous years, a large number of poles were broken flush with the ground, but those poles have been replaced. The telegraph wires from St. Laurent to St. Pierre, owing to too much slack, were causing trouble to the telephone service, therefore in June, I started the re-installation of those wires in such a way that they could not interfere with the telephone wires.

In view of the considerable length of the cable lines from the Saguenay river to Quebec, it is an absolute necessity for the department to provide a good steamer of convenient dimensions for exclusive service for cable work. Such a boat would prevent all delay in repairing the cables in this section.

It is also very convenient to have on hand a sufficient stock of material, and therefore I would ask you to be kind enough to supply my office with a general stock of materials needed for the repair of the telegraph and cable lines.

I have the honour to be, sir,

Your obedient servant,

J. P. POULIOT,

District Superintendent.

REPORT No. 6.

LEAMINGTON, ONT., July 30, 1907.

D. H. KEELEY, Esq.,
General Superintendent, Government Telegraph Service,
Ottawa.

DEAR SIR,—In the matter of the Pelee Island Telephone System, I beg to report as follows:—

Cable communication was interrupted on September 29, and restored on October 15, 1906, and again interrupted on June 3, and restored on June 20, 1907. In both instances the damage was slight, and fortunately no additional cable beyond that in use was required for repairs.

There should be at least about half a knot of good new cable on hand here for repairs when required, as the old cable on hand is of very doubtful quality. With the exception of the above interruptions the cable has worked quite satisfactorily during the past year.

The land line on Pelee Island is in good shape and good working order, except a piece about 400 yards in length near the North Point lighthouse, where the beach has been washed out considerably, and some poles were also washed out during the spring storms which struck the island from westerly directions, causing the lake to break over the beach into the marsh east thereof. In April last when the worst damage was done, we repaired as well as we could for rough weather, but did not at that time recapture all the poles that were washed out, and were obliged to temporarily place insulators and wire on tree limbs until repairs could be made later. Since then we have recaptured all the poles, but have been unable, owing to inability to get men, to put them and shift a few others out of the flooded marsh, close by where they are leaning rather heavily, and may make trouble soon.

In June last, according to instructions from the department, we shifted a little over two miles of the line from the southwest part of the island to another location more inland, so as to give a connection at James Scrigley's, a point between the West Dock office and the office at Pelee South, as soon as an instrument is received for that purpose.

On the mainland, the line is in good working order, but a number of the old poles need to be replaced by new ones, as they are badly rotted and unsafe to climb when making necessary repairs.

As there are additional telephones being asked for both on the island and mainland, I consider it will be in the interest of better service to split the line from Leamington office and putting the island line to the island and mainland line to Point Pelee on separate wires, and avoid overloading, at the same time making it easier to detect whether troubles, when they occur, are on the island or mainland lines. In splitting the line from Leamington towards the lake about 50-4 pin cross arms will be required, together with braces, bolts, pins, insulators and wire necessary for the work.

During May and June last a supply of new poles arrived at Leamington station for use in repairing the mainland line.

I herewith inclose list of offices or stations now in use, operators and agents, commission or salaries, and summary of messages sent and received during last year.

Your obedient servant,

JOHN M^cR. SELKIRK,

District Superintendent.

REPORT No. 7.

NORTHWEST TELEGRAPHS.

I beg to herewith report the condition of the line, the expenditure of moneys for construction, and the change of the personnel of the staff, during the past twelve months.

The line has been kept in fairly good working order during the past year, but will require a considerable expenditure to put it in good condition, estimates for which will be forwarded.

Last summer it was late when we began pole renewals, and it was with difficulty that we were able to put it in shape for the winter season.

There were several places where the line had to be removed from farm lands to the roadway. In this regard we had the most urgent cases attended to; which were a portion of the line between Qu'Appelle and Fort Qu'Appelle; a short distance on the Lloydminster loop; a piece between Star and Fort Saskatchewan, and a few miles on the Wood Mountain division. There are still a number of places where the line runs through farm lands, and which will, from time to time, have to be moved to the highway.

The whole of this country is settling up rapidly, and farmers are inclosing parts of our line in their fields.

From Station to Station.

Line from Qu'Appelle to Fort Qu'Appelle, 17 miles, is in good working order; but there is a considerable portion of it running through farms, which will have to be moved to the road allowance. Some work in this connection was done on this part of the line during the year, but as it was late in the season when we got started the

work could not be completed. The office at Fort Qu'Appelle is in a building owned by the department. It was built some twenty-four years ago, and is falling to pieces and past repair.

From Fort Qu'Appelle to Lipton, 11 miles. The first four miles the poles are in bad shape and want renewing; the next seven miles the line is in fairly good condition. The office at Lipton is in the Canadian Pacific Railway station, and our wire is operated by them on commission.

From Lipton to Kutawa, 44 miles. The line has suffered severely this spring from lightning and prairie fires, and will require a considerable number of new poles. Lightning storms have been particularly severe all through the Northwest this spring. The office at Kutawa is rented from A. V. Lindeburgh.

The office at Touchwood, six miles east of Kutawa, which was operated at the expense of the Hudson's Bay Company, was closed on June 1, 1907.

From Kutawa to South Humboldt, 78 miles, has been kept in working order with a great deal of difficulty owing to the extremely hard winter as well as lightning and prairie fires. Here again we will require a number of new poles. The office building at South Humboldt was built by the department two years ago, and excepting that it requires painting to preserve it, is in good repair.

From South Humboldt to Saskatoon, a distance of 69 miles, the same conditions prevail as east of Humboldt. The office at Saskatoon is in the Canadian Pacific Railway Company's office, and our wire is operated by them.

From Saskatoon to Warman, 14 miles, our wire is in first class condition. At Warman our office is in the Canadian Northern Railway station, and our wire operated by their people on commission.

From Warman to Henrietta, 38 miles, the line runs through a prairie country. On this part also the lightning and prairie fires have done considerable damage, and a number of new poles will be required to put it in good shape for the coming winter. The office at Henrietta is rented from W. J. Salsbury.

From Henrietta to Battleford, 57 miles, the line runs through timber and prairie. This part of the line is in need of an overhauling and a number of new poles. The building formerly used as an office at Battleford was in such a state of decay that it had to be discarded. We at present occupy a building rented from Tom Dewan.

From Battleford to Bresaylor, 25 miles. Here we have the iron poles, and we have little or no trouble on this beat. Our office at this point is in a building rented from W. Sayers.

From Bresaylor to Lloydminster, 70 miles. The first 48 miles of this part of the line is also of iron poles, and we experience but little trouble on it. The next 22 miles is a loop built from the main line. It was put up in the winter three years ago with poplar poles. These poles are rotting fast and trouble on this loop is frequent. This loop should be rebuilt with tamarack poles; or if iron poles could be secured they would be much better. The office building at Lloydminster is owned by the department.

From Lloydminster to Onion Lake, 50 miles. The first 22 miles is the loop, and the same conditions apply. The next 28 miles is in very good order. The high water this spring in the Saskatchewan river at old Fort Pitt carried away our wire at the crossing of the river, and it was several days before we could get the new wire strung. We now have a new mast here as well as new wire, and I do not anticipate any further trouble at this point for some time to come. The office at Onion Lake is in our own building. It is in good condition, but would be much improved by painting.

From Onion Lake to Moose, 37 miles, the line is in good working order, but runs through a very rough country, being swamps and timber all the way. New roads are constantly being made, which leaves the line isolated and difficult to follow. The office here is in an old log building and very much dilapidated. It is owned by the department.

From Moose to St. Paul des Metis, 32 miles. This part of the line runs through swamps, timber and patches of prairie. Our chief trouble through these sections is

bush fires, but the line has been kept in fairly good working order. The office at St. Paul des Metis is in the Roman Catholic Mission building.

From St. Paul des Metis to Saddle Lake, 18 miles, the line runs through a similar country, and the same conditions apply as between Moose and St. Paul des Metis. The office building at Saddle Lake is owned by the department, and is in a dilapidated condition.

A telephone line from here to Sacred Heart Mission, six miles, is in good order.

From Saddle Lake to Victoria, 37 miles, the line runs through scrub timber, sand hills and jackpine, and is in good order. Our chief trouble on this part of the line is caused by trees falling on the wire. The office at Victoria is in a new building erected by the department last year, and is in good condition.

From Victoria to Andrew, 10 miles. Wire crosses the Saskatchewan river, and runs through scrub timber and prairie. The line is in good working order. The office at Andrew is in Mr. E. Carey's store.

A telephone line runs from here to Whitford, six miles. It is in good condition, and working well.

From Andrew to Star, 18 miles, the line is in good working order. The office at Star is rented from E. A. Holmes.

From Star to Fort Saskatchewan, 25 miles. This part of the line has all been rebuilt during the last two years, and is in first class order. The office at Fort Saskatchewan is rented from S. A. Hanson, and is centrally located.

From Fort Saskatchewan to Edmonton, 18 miles. Line crosses the Saskatchewan river, and continues on the north side of the river to Edmonton. This part of the line is comparatively new, and is in perfect order. Our office at Edmonton has lately been moved into the Canadian Pacific Railway Telegraphs office.

From Edmonton to Athabasca Landing, 98 miles. The line runs through prairie, scrub timber and jackpine. On this section we are bothered with falling timber and prairie fires. The line has been kept in remarkably good working order considering the long stretch, interruptions being very rare.

The several telephone lines from Edmonton are all reported in good working order. This year we built about three miles of telephone line to connect Stony Plain railway station with the line which connects at Edmonton. It is working well. The poles for this extension were supplied by the people residing there.

Wood Mountain Section.

From Moosejaw to Wood Mountain, 90 miles. The first 10 miles is new line; the next 80 is very old and hard to keep in repair. This line is very subject to lightning storms, which are reported more severe than in any other part of the country. Every summer a large number of poles are destroyed. Very often during a severe storm, six or seven consecutive poles will be completely demolished, and this probably occurs at several points. Along a portion of the route, cattle are grazing, and these rubbing against the poles invariably push down any that become weak. Lineman Brown is on the line all the time, but finds it very hard to prevent serious delay to business. Some work was done on this part of the line during the year, in the way of renewing poles, but it will be necessary to have the line thoroughly overhauled to put it in good working order. This is a treeless district, and if iron poles could be secured for this line it would, I feel sure, be most beneficial.

Wood Mountain to Willow Bunch, 40 miles. The line is nearly new, and in excellent condition. Tamarack poles were used in the building of this line, and they are not easily destroyed by prairie fires; lightning, however, causes trouble occasionally. The office at this point is in a new building erected by the department two years ago. It is in good order, but badly in need of painting.

Batoche Division.

The line from Duck Lake to Batoche, nine miles, is in good working order; as also the telephone line from Duck Lake to the Indian Agency.

ROBT. C. MACDONALD,
District Superintendent.

REPORT No. 8.

DEPARTMENT OF PUBLIC WORKS OFFICE,
GOVERNMENT TELEGRAPH SERVICE,
VICTORIA, B.C., August 1, 1907.

D. H. KEELEY, Esq.,
General Superintendent Government Telegraph Service,
Ottawa.

SIR,—As per instructions contained in your telegram of the 8th ultimo, I have the honour to herewith submit a report on the Government telegraph and telephone lines on Vancouver Island, B.C., and the Golden and Windermere line in East Kootenay, under my charge, for 1906-7.

Name of Line.	Miles in Operation.	No. of Offices.	No. of Operators.	No. of Repres. and Linemen.
*Victoria and Cape Beale	118	6	6	5
Alberni and Cape Beale	57	2	2	C. P. R. Lineman.
Alberni and Clayoquot	86 3/10	7	6	5
Nanaimo and Comox	90	10	10	2
†Parksville and Alberni branch	30	.....	.....	C. P. R. maintain P. & A. branch.
Van. Isd. and Salt. Spg. Isd. Telephone line	26	5	5	Repairs done by agents as occasions requires.
‡Golden and Windermere	90	4	4	2

*Mr. E. Gordon agent at Otter Point acts as Line Repr. also. †Mrs. Williams operator at Parksville is also operator for the Alberni branch. ‡Thirteen phone subscribers.

Victoria and Cape Beale Line.

In addition to the regular telegraph offices, there are 'phones supplied to the following parties, &c.: Sooke wharf, Capt. Rucker's residence, Rucker's cannery, Jordan Milling Company, Bell Irving cannery, Line Repairers' hut, Jordan River. During the winter 'phones were installed at Tsusiat and Seven Mile River huts for the use of the patrol men employed by the Marine and Fisheries Department, also 'phone installed at the new lighthouse, Pachena Point, the wire having been run from the mainland considerable distance to give the required connection; also a new trail cut to enable the wire to be strung.

There is at present under construction by the Marine and Fisheries Department a new trail for pack-horses in connection with Life-saving and Aids to Navigation between Bamfield and Carmanah, and when completed the telegraph line should be placed upon it, making it much easier to keep in repair, and saving considerable time

in getting the line working in case of a break by reason of the much better travelling than by the present trail.

When this is done it will still be necessary to improve the trail on the sections east of Carmanah lighthouse for the proper working of the line; also to increase the staff of linemen and salaries of same, and put in force the recommendations contained in my recent reports.

Alberni and Cape Beale Telegraph Line.

This line is maintained by the Canadian Pacific Railway Company, and is often down for a week or ten days and longer at a time. By courtesy of the Canadian Pacific Railway office at Bamfield, messages are then sent or received by cable when not otherwise busy with cable business.

Alberni to Clayoquot.

This line has been working very well, with few interruptions, although constructed through a very rough country. Mr. E. S. Reeve, operator and line repairer at Clayoquot, resigned, and Mr. E. B. Garrard, operator and line repairer at Uchucklesit, was transferred to Clayoquot, Mr. Frank Tyler being appointed to the latter's place as line repairer and telephone agent. A branch line was constructed from a point on the main line near Effingham Inlet to Sechart, a distance of about nine miles. Mr. Hillier, operator and line repairer at Toquart, appointed line repairer on this branch, at a salary of $10 per month.

Nanaimo and Comox Telegraph Line.

Telephone connection has been given Little Qualicum and Nanoose Bay; the 'phones have been installed at the residence of Mrs. M. E. Crump, at Little Qualicum, with Mrs. Crump as agent, and in the Arlington Hotel, at Nanoose Bay, with Mr. P. L. Good as agent. This has been of great convenience to travellers and settlers in the neighbourhood. Telephones have also been installed at Nanaimo, Parksville, Union Bay and Cumberland offices.

For some time past very considerable trouble has been experienced in getting the operator at Nanaimo to adjust errors between his office and the other offices on this line, and the Alberni-Clayoquot line in consequence. Revenue statements have not been forwarded to the accountant for months after the usual time, the operator claiming that he was too busy; although Mr. Wilson, Superintendent Canadian Pacific Railway Telegraph, gave his additional assistance, of which I apprised you by letter of June 22 that the department was to be charged with the cost of same; the service has been no better. As I repeatedly recommended, the only solution of the difficulty is to have our own operator in our own office.

Vancouver Island and Salt Spring Island Telephone Line.

This line is in good working order, and gives every satisfaction to the settlers along its route.

Golden and Windermere.

This is a combined telephone and telegraph line, and considerable trouble has been met with upon this line recently owing to lack of knowledge on the part of the operators, line repairers and subscribers in connection therewith. I have just made a trip of inspection over it in company with Mr. J. S. Macdonald, General Inspector of Government Telegraphs, and a practical telephone and telegraph expert, and put every telephone and telegraph instrument in first class working order. The line is now working in perfect order. I found the line itself in fairly good condition, but in

various places where the soil was sandy the poles are rotted off at ground level. I have instructed Mr. V. F. Dunn, our line repairer, to procure assistance and have the most dangerous poles reset, and also to cut out all alder and poplar brush along the line. Several of the poles at various points have been destroyed by lightning, and those I have had replaced by new poles. The following subscribers for 'phones beginning at Golden:—

W. Wright, at Wright's,	6	miles from Golden.
T. R. Haddon, at McMurdo,	13	"
W. Johnston, at Nelson Creek,	18	"
T. Bingham, at Wapta,	20	"
A. Soles, at Hog Ranch,	23	"
Wm. Barry, at Spillimacheen,	41	"
H. Atchison, at Brisco,	50	"
B. Ashton, at Vermilion,	56	"
J. L. McKay, at Sinclair,	66	"
Columbia River L. Co., at Athalmer,	79	"
J. J. Lake, at Athalmer,	79	"
R. R. Bruce, at Wilmer,	82	"
Mr. Gallop, at Canterbury,	82	"

'Phones are also installed in our offices at Golden, Spillimacheen, Wilmer and Windermere.

I have the honour to be, sir,
Your obedient servant,
WM. HENDERSON,
Resident Architect.

REPORT No. 9.

SUMMERLAND, B.C., July 10, 1907.

D. H. KEELEY, Esq.,
General Superintendent, Government Telegraph Service,
Ottawa.

DEAR SIR,—Hereunder please find report of work done, staff changes, offices established and tariff in operation, in compliance with your request by telegram of the 8th instant.

Considerable construction work was done prior to July 1, 1906, which owing to the departmental books being closed early in April and no funds available, vouchers covering the expenditure were not issued until after July 1, and in consequence has not been heretofore reported. These cover the construction of forty-five miles of line between Penticton and Kelowna, including one mile of cable crossing Okanagan lake at Kelowna, and completing the circuit, making a continuous line from Kamloops to Vernon.

On October 9, 1906, I was notified of an appropriation of $5,500 to place poles where trees are now used between Nicola and Penticton. I immediately began work, continuing until forced to suspend on account of winter setting in. Work was again resumed on June 1, and will be complete in approximately three or four weeks. Great difficulty has been experienced in keeping line open, in consequence of which maintenance account is abnormally high.

By way of comparison, I might mention that the section above referred to has during the past year, cost an average of $4 per mile for line repairs alone, while the section built between Penticton and Kelowna, where poles were used exclusively, has cost but 50 cents per mile.

STAFF CHANGES.

The following changes in staff have taken place during the year:—

Agency, Kamloops.—L. A. Palmer appointed to succeed C. S. Stevens.

Agency, Princeton.—B. S. Kennedy to succeed the A. E. Howse Comapny, resigned.

Agency, Bradshaws.—Closed; agent not choosing to work under new rules.

Agency, Okanagan Falls.—W. B. Hine to succeed J. D. Snodgrass, dead.

Agency, Penticton.—J. A. Schubert to succeed J. W. S. Logie, resigned.

NEW OFFICES.

Frasers, Friskens, Petersons, Guichons, Government office Princeton made reporting offices October 1, when 'Dead head' business was cancelled.

Diamond Vale, near Coutlee, with Diamond Vale Coal Company as agents.

Daly.—In order to give better facilities for the business of the Daly Reduction Company, at Hedley, a separate office was opened at their office for their business only, which is being operated without expense to the department.

Okanagan Centre.—A new office in a new town, on the Okanagan lake between Kelowna and Vernon.

TARIFF IN OPERATION.

When telephone rentals were cancelled and agents paid same rates as general public, the following changes were made in conversation rates:—

Old Rates.		New Rates.	
Messages.	Conversations.	Messages.	Conversations.
Up to 100 mi. 25, 2	5 cts. per min.	Up to 100 mi. 25, 2	10 cts. per min.
100 to 150 " 35, 3	10 "	100 to 150 " 35, 3	15 "
150 to 200 " 40, 3	12 "	150 to 200 " 40, 3	20 "
200 to 300 " 50, 4	15 "	200 to 300 " 50, 4	25 "
Minimum 25	Minimum 25.	Minimum 25	Minimum 15.

The change has been of great benefit in the operation of the line. By raising the rate per minute, and reducing the minimum, patrons now do their business quickly and get off the line.

At the time of change above noted, all agents not on salary, were allowed a commission of twenty per cent on 'receipts and checks.' This line also allowed to make a messenger charge for bringing a party to the telephone for conversation.

All of which is respectfully submitted.

Faithfully yours,

CHAS. S. STEVENS,

Superintendent.

REPORT No. 10.

VANCOUVER, B.C., September 19, 1907.

D. H. KEELEY, Esq.,
General Superintendent, Government Telegraphs,
Ottawa.

SIR,—I respectfully submit herewith my report of the operation of the Yukon telegraphs for the nine months of the fiscal year, July 1, 1906, to March 31, 1907.

MAIN LINE.

Ashcroft to Boundary.

As anticipated in my report of November 16, 1906, a substantial increase is shown in the revenue and number of messages handled, as compared with the same period in 1905-6 at points between Ashcroft and Hazelton. The advent of settlers, prospectors and timber cruisers into this district in anticipation of the early construction of the Grand Trunk Pacific Railway has created a large amount of new business for the line.

On account of the many breaks from falling timber in the district between Hazelton and Telegraph Creek, two repair gangs were sent out last June, one working north from Hazelton, and the other south from Telegraph Creek. The work done by these parties in widening the right of way and falling menacing timber, was very satisfactory, and the interruptions on that section during the past winter were reduced to a minimum. Next season, it is proposed to send a repair gang north from Telegraph Creek to Atlin, as that portion of the line has not been thoroughly overhauled since its construction in 1900, except for the local work done by linemen at the different stations during each year, and as the poles are decaying fast a general repair gang to part repole this section will be necessary; this also applies in part to the section south of Hazelton to Quesnelle, but the upkeep of this portion of the line can be maintained by the regular staff for another year at least.

Between Ashcroft and Quesnelle the line is also in need of repoling, the poles, of native fir, decaying rapidly, and have been reset so often that the greater part of the line in this section will require new poles. An appropriation for this work has been asked for, and if granted, work will be commenced as soon as the season will permit. From Atlin to the Boundary, the usual annual general repairs were made by the regular linemen under the supervision of Line Foreman Couture, of Dawson.

Owing to the Conrad Consolidated Mining Company closing their Mess House at Conrad, the arrangement made with them through the manager, whereby they were to board the operator free of charge to the department, was cancelled by them, and in consequence a telephone system was substituted between Carcross and Conrad, and the office at Conrad placed on a commission basis, twenty-five per cent of our line tolls being allowed the agent, Mr. McLean, for his services. This arrangement has given good satisfaction.

PORT SIMPSON BRANCH.

The revenue and volume of business on this branch also shows a satisfactory increase over the corresponding months of the previous year, and the prospects are bright for a further increase in the coming years.

Through communication with Port Simpson was maintained throughout the winter months, very few breaks occurring, and the breaks being repaired promptly, very little delay to business was occasioned at any time. Some twelve or fifteen settlers having located in the Kitsumkalum valley, fifteen miles west of Skeena Canyon, a request was made by them to the department for an office at that point, and their petition having been favourably considered, an office will be opened there when navigation permits of men and material being sent in.

The Grand Trunk Pacific having selected Prince Rupert as their Pacific coast terminus, our line should be extended from Aberdeen to that point, to meet the requirements of residents and others having interests at Prince Rupert. The extension would cover about forty miles, and as there are several large canneries along the route, it is proposed to give them telephone connection with the telegraph lines. An appropriation has also been asked for to carry out this work.

LILLOOET BRANCH.

In July, 1906, a small gang was sent over this branch part repoling and doing general repairs. The line is now in good condition. An increase in revenue and messages is also shown on this branch.

HORSE FLY BRANCH.

This line from 150-Mile House to Quesnelle Forks is in good repair. The poles with few exceptions are still in a healthy condition, and interruptions seldom occur. Business here also continues to increase, particularly at Bullion, where the Guggenheim interests are now in control, and extensive development work is being carried on.

BARKERVILLE-QUESNELLE BRANCH.

Ordinary repairs by the local operators (linemen) has sufficed to keep this line in working condition for the past year, but as nearly all the poles have been reset several times, they are now too short to be again reset, and are rapidly decaying. The line will require to be repoled next season, and an appropriation has been requested for this purpose.

I inclose herewith a comparative statement covering the entire system, both main line and branches, showing the increase in revenue and messages at each office, for the nine months of the fiscal year 1906-7.

Yours truly,

J. T. PHELAN,

Acting Superintendent.

COMPARATIVE STATEMENT, Yukon Telegraphs, showing messages and revenue, July 1, 1905 to March 31, 1906 and July 1, 1906 to March 31, 1907, main line and branches.

DAWSON MAIN LINE.

Offices.	1905-1906.			1906-1907.			Messages.				Revenue.	
	Messages.		Revenue.	Messages.		Revenue.	Increase.		Decrease.		Increase.	Decrease.
	Sent.	Received.	$ cts.	Sent.	Received.	$ cts.	Sent.	Received.	Sent.	Received	$ cts.	$ cts.
Ashcroft, B.C.	6,769	8,094	9,469 48	7,970	9,897	11,712 59	1,201	1,803	....	....	2,243 11	
Alexandria	55	64	14 58	104	90	38 26	49	26	....	....	23 68	
Atlin	909	842	2,506 90	936	892	2,345 82	27	50	....	....	....	161 08
Big Salmon, Y.T.	15	3	18 95	52	16	51 10	37	13	....	....	32 15	
Blackwater	7	7	3 45	9	18	6 67	2	11	....	....	3 22	
Bobtail Lake	6	6	50	12	8	11 30	6	2	....	....	10 80	
Bonaparte	63	54	25 41	57	42	23 02	....	....	6	12	....	2 39
Boundary	2,586	1,993	....	2,421	2,216	....	....	223	165			
Bulkley Ranch	114	94	166 45	365	344	494 17	251	250	....	....	327 72	
Burns Lake	7	5	7 25	25	20	10 45	18	15	....	....	3 20	
Carcross	382	396	415 30	517	441	773 91	135	45	....	....	358 61	
Centre Cabin	1	1	....	1	2	1 15	....	1	....	....	1 15	
Clinton, B.C	558	487	250 57	753	738	341 34	195	251	....	....	90 77	
Coffee Creek	29	28	36 16	69	40	107 96	40	12	....	....	71 80	
Conrad	202	156	250 90	389	412	674 70	187	256	....	....	423 80	
Dawson	7,264	7,282	32,187 35	7,171	7,203	32,976 85	....	....	93	79	789 56	
Echo Lake	4	3	15 09	1	....	25	....	....	3	3	....	14 84
Eighth Cabin	....	....	....	2	1	1 00	2	1	....	....	1 00	
Fifth Cabin	3	1	1 75	6	4	4 80	3	3	....	....	3 05	
First Cabin	6	3	4 64	6	5	9 36	....	2	....	....	4 72	
Fort Selkirk	133	110	137 07	150	101	235 77	17	....	....	9	98 70	
Forty Mile	434	321	405 25	680	487	764 49	246	166	....	....	359 24	
Fourth Cabin	2	2	....	18	9	19 21	16	7	....	....	19 21	
Fraser Lake	97	81	105 70	170	153	216 99	73	72	....	....	111 29	
Hazelton	458	440	869 08	791	785	992 58	333	345	....	....	123 50	
Hootalinqua	63	53	92 24	71	43	68 82	8	....	....	10	....	23 42
Iskoot	....	....	....	2	....	2 16	2	....	....	....	2 16	
Lower Labarge	41	31	50 34	29	42	30 45	....	....	11	12	....	19 89
Moricetown	....	....	....	16	12	12 22	16	12	....	....	12 22	
Nahlin	7	6	12 35	6	4	7 28	....	....	1	2	....	5 07
Nakina	2	3	1 00	5	7	5 37	3	4	....	....	4 37	
Ninth Cabin	2	2	....	1	1	....	....	....	1	1	....	

Ogilvie	67	49	58 34	49	42	20 87			18	7		37 47
115 Mile House	189	130	76 92	283	191	118 53	94	61			41 61	
150 Mile House	505	503	302 14	815	735	403 38	310	232			101 24	
Pike River	1		50						1			50
Quesnelle	478	445	333 35	821	807	655 35	343	362			322 00	
Raspberry Creek												
Second Cabin	1	3	1 63	4	3	50	3					1 13
Seventh Cabin				1		2 00	1				2 00	
Shesley	7	5	5 27	19	12	6 00	12	7			73	
Sixth Cabin				1	1		1	1				
Soda Creek	274	228	161 71	376	310	195 72	102	82			34 01	
South Bulkley	12	12	10 38	15	13	22 15	3	1			11 77	
Stewart River	60	48	36 40	54	46	95 05			6	2	58 65	
Stoney Creek	26	28	20 58	42	51	39 95	16	23			19 37	
Tagish	5	3	7 03	14	12	12 44	9	9			5 41	
Tantalus	122	121	138 30	126	76	76 14	4			45		62 16
Telegraph Creek	168	145	463 39	187	165	463 22	19	20				17
Third Cabin	1	2		2	3	1 03	1	1			1 03	
25 Mile Cabin												
Whitehorse	1,563	1,782	2,816 62	1,718	1,761	3,357 97	155			21	541 35	
Yukon Csg	58	75	86 24	97	87	105 24	39	12			19 00	
Totals	23,756	24,147	51,566 56	27,429	28,348	57,515 58	3,979	4,392	306	191	6,277 14	328 12

NOTE—Boundary office revenue included in Dawson.

SUMMARY.

Increase of Messages Sent	3,673
" " Received	4,201
" Revenue	$ 5,949 02

BRANCHES, YUKON TELEGRAPHS.

Offices.	1905–1906.			1906–1907.			Messages.				Revenue.	
	Messages.		Revenue.	Messages.		Revenue.	Increase.		Decrease.		Increase.	Decrease.
Port Simpson Branch.	Sent.	Rec'd.	$ cts.	Sent.	Rec'd.	$ cts.	Sent.	Rec'd.	Sent.	Rec'd.	$ cts.	$ cts.
Aberdeen	314	311	456 39	710	636	1,006 85	396	325			550 46	
Graveyard Pt	12	6	4 40	46	10	30 82	34	4			26 42	
Lorne Ck	105	69	102 95	113	73	59 25	8	4				43 70
Meanskinisht	69	67	25 40	116	108	83 84	47	41			58 44	
Pt. Simpson	392	252	895 95	821	681	1,282 51	429	429			386 56	
Kitselas	88	66	67 62	165	108	104 42	77	42			36 80	
Telegraph Pt	1	2	98	5	2	3 48	4				2 50	
Totals	981	773	1,553 69	1,976	1,618	2,571 17	995	845			1,061 18	43 70
Horse Fly Branch.												
Bullion	214	189	258 32	649	533	763 15	435	344			504 83	
Harpers Cmp.	170	119	85 31	180	135	96 41	10	16			11 10	
Quesnelle Fks	259	234	194 57	446	348	276 95	187	114			82 38	
Totals	643	542	538 20	1,275	1,016	1,136 51	632	474			598 31	
Barkerville Branch.												
Barkerville	505	562	602 96	732	740	741 43	227	178			138 47	
Lafontaine	73	56	20 74	68	52	23 13			5	4	2 39	
Totals	578	618	623 70	800	792	764 56	227	178	5	4	140 86	
Lillooet Branch.												
Lillooet	223	249	193 28	335	345	273 65	112	96			80 37	
Pavilion	41	43	21 61	41	42	25 86				1	4 25	
Totals	264	292	214 89	376	387	299 51	112	96		1	84 62	

SUMMARY OF BRANCHES.

Port Simpson Branch	Increase Messages Sent	995	
	" " Received	845	
	" Revenue		$1,017 48
Horsefly Branch	Increase Messages Sent	632	
	" " Received	474	
	" Revenue		598 31
Barkerville Branch	Increase Messages Sent	222	
	" " Received	174	
	" Revenue		140 86
Lillooet Branch	Increase Messages Sent	112	
	" " Received	95	
	" Revenue		84 62
	Total increase in Revenue		$1,841 27
	Total increase Messages sent	1,961	
	" " received	1,588	

SUMMARY OF TOTAL INCREASES MAIN LINE AND BRANCHES.

Increase of Messages Sent		5,634
" " Received		5,789
Total " Revenue		$7,790.29

REPORT No. 11.

OFFICE OF THE INSPECTOR, YUKON TELEGRAPHS,
OTTAWA, February 11, 1907.

D. H. KEELEY, Esq.,
General Superintendent, Dominion Government Telegraphs,
Ottawa.

SIR,—I beg leave to transmit herewith my report covering an inspection of the Dominion Government's Yukon telegraphs, from Hazelton, B.C., to Telegraph Creek, B.C., which is in continuation of my previous report published last year.

HAZELTON, B.C.

Hazelton is situated on the left bank of the Skeena river, a short distance above the junction of the Bulkley and Skeena rivers. It stands on an extensive flat, elevated ten or fifteen feet above the river, and at the base of a high terrace which rises very steeply to a height of about 150 feet. Several traders live here. There is a church, a hospital, two hotels, and it is the headquarters of several packers who carry supplies to different adjacent parts of the country. There is also quite an Indian settlement.

The low region about Hazelton seems to be shut in on all sides by high mountain ranges; the highest points probably attain an altitude of from 8,000 to 9,000 feet. To the west and northwest the continuation of these mountains is concealed by a nearer range which lies between the Skeena and Kispiox rivers, the summits of which are at a distance of from six to ten miles from Hazelton, and reach heights estimated at from 5,000 to 6,000 feet. This smaller range runs approximately in a northeasterly and southwesterly direction. To the north and northeast, a massive range from 6,000 to 7,000 feet in height runs north-northwest and south-southeast.

The summer temperature of the region about Hazelton is often high, snow generally falls in October but soon melts, the winter snow not coming until about the first week of December. The climate is very much like our own, with the exception of the winter which, though rather shorter, is more severe.

The Skeena river usually opens for navigation during the last week in April or first week of May.

Following is a statement of the average yearly cost to the department of maintaining the Hazelton office:—

	Salary per Year.	Board allowance.	Total.
	$ cts.	$ cts.	$ cts.
G. M. Swan, manager and operator	1,200 00	365 00	1,565 00
E. R. Cox, night operator	1,200 00	365 00	1,565 00
E. E. Charleson, line foreman	1,800 00	365 00	2,165 00
J. C. K. Sealy, lineman	900 00	365 00	1,265 00
Rent of office and warehouse, $40 per month			480 00
Board			92 00
Wood			379 00
Sundries			666 78
Total			8,177 78

Owing to the long stretch of line from Ashcroft to Hazelton, 536½ miles, and from Hazelton to Atlin, 491 miles, it was necessary to install repeaters at Hazelton, these distances being almost the limit, as, in this country with large and comparatively low resistance wires, it is not customary to operate a circuit over 600 miles in length.

The repeater used on our line is known as the Weiny-Phillips.

Leaving Hazelton, the telegraph line takes a general northerly direction. The country traversed by the line will be described in sections from station to station.

Hazelton to First Cabin, 27·33 miles.

The line repairing from Hazelton to the crossing of the Kispiox river, seven miles, is done by the lineman stationed at Hazelton, J. C. K. Sealy. The upkeep of this section of the line is very easy, as the timber is light, and owing to constant travel by Indians and others the trail is in very good shape. The balance of the work on the distance from the River Kispiox to First Cabin, 20·33 miles, is done by Hugh Taylor, who has a cabin in the Kispiox valley. The line on this stretch from Hazelton to First Cabin is in good condition. Construction was easy.

There are 721 poles from Hazelton to First Cabin.

First Cabin to Second Cabin, 21·7 miles.

H. A. Cullon, operator, $75 per month and provisions.

H. Taylor, lineman, $70 per month and provisions.

Cullon takes care of the line from First Cabin to 'half-way' refuge north, and E. Barrett from Second Cabin to 'half-way' south. The upkeep of these sections is rather more difficult owing to the rougher nature of the country and the heavy timber along the right of way.

There are 521 poles from First Cabin to Second Cabin.

Second Cabin to Third Cabin, 18·6 miles.

E. Barrett, operator, $75 per month and provisions.

Hunter Corner, lineman, $70 per month and provisions.

The section from Second Cabin to 'half-way' north is covered by H. Corner, lineman at Second Cabin, and the section from Third Cabin to 'half-way' south is

covered by Charles Martin, the operator at Third Cabin. This stretch from Second to Third Cabin is also in first class condition, although the country is still getting rougher, more mountainous and with heavy timber.

There are 330 tree poles and 110 set poles from Second to Third Cabin.

Third Cabin to Fourth Cabin, 14·86 miles.

Charles Martin, operator and lineman, $75 per month with provisions.

Charles Martin is a local Indian, and he repairs the line to 'half-way' north, where he is met by F. Charleson, lineman at Fourth Cabin, who repairs from Fourth Cabin to 'half-way' south. Between these cabins is a very high hill or mountain, called Poison mountain, which is very difficult of ascent and descent, with little choice between the two. The country is still very rough and heavily timbered, but in spite of difficulties the line is kept up very well.

There are 252 tree poles and 111 set poles on this stretch.

Fourth Cabin to Fifth Cabin, 15·97 miles.

W. Toneri, operator, $75 per month and provisions.

F. Charleson, lineman, $70 per month and provisions.

W. Toneri repairs to 'half-way' north, where he is met by Lineman Loucks, from Fifth Cabin, who repairs from Fifth Cabin to 'half-way' south. The country in the immediate vicinity of Fourth Cabin is much better, being flatter and the timber lighter, but about four miles north from Fourth Cabin the line ascends and crosses Babiche hill, which has ever been a source of trouble during the winter season. The line work and right of way clearing is very well done and the line kept in good shape.

There are 393 tree poles and 47 set poles on this stretch.

Fifth Cabin to Sixth Cabin, 16·69 miles.

E. A. Hawley, operator, $100 per month with provisions.

C. E. Loucks, lineman, $3 per day with provisions.

Fifth Cabin is a relay office where, when the line is down on either side, messages are received and forwarded as soon as the line comes up. Mr. Hawley is an expert operator, and one of our best men.

C. E. Loucks, the lineman, is also a good man, and one of the hardest worked on the line. He repairs from Fifth Cabin to 'half-way' north, where he is met by the lineman from Sixth Cabin. The country is very rough and heavily timbered.

There are 408 tree poles and 44 set poles on this stretch.

Sixth Cabin to Seventh Cabin, 19·90 miles.

G. T. Brown, operator, $100 per month with provisions.

W. Ross, lineman, $3 per day with provisions.

G. T. Brown covers from Sixth Cabin to 'half-way' north, where he is met by the lineman from Seventh Cabin.

The north beat from Sixth Cabin is in very bad shape. Right of way is very narrow, and has evidently not been cleared since construction.

There are 618 tree poles and 30 set poles on this stretch.

Seventh Cabin to Eighth Cabin, 18·83 miles.

P. Burnell, operator, $100 per month and provisions.

L. Loiselle, lineman, $3 per day and provisions.

P. Burnell covers the north half, where he is met by the lineman from Eighth Cabin.

This section of the line is built up on the mountain side almost above timber line, and from appearances the valley of the south fork of the Naas river could have been followed to better advantage. Although over very rough country, this stretch is kept in as good order as nature will permit. As the line raises towards the summit, there are more slides and falling timber. The nature of the country makes travelling very arduous.

The north beat from Seventh Cabin is the roughest so far. It is simply a succession of deep canyons. There are not enough poles to the mile on the whole distance from one cabin to the other, as there are only 380 tree poles and 3 set poles, or 20 to the mile.

Eighth Cabin to Ninth Cabin, 18·33 miles.

J. Mooney, operator, $100 per month with provisions.

Louis Dubois, lineman, $3 per day with provisions.

The work on the line is done in the same manner as on other stretches, although I consider that the section north from the Eighth Cabin is almost as bad as it could be. It is above timber line, and crosses the Naas summit, a snow-covered and wind-swept mountain top.

Between the Eighth and Ninth cabins the men have to contend with snowslides in addition to the landslides and falling timber with which they have heretofore struggled. It is simply marvellous that the line is kept in working order at all. Across this summit not a tree grows, and poles have to be carried from five to six miles either way. When one considers that from a three to a four mile climb is required to reach this summit from either side, and that it is almost five miles across, one can form an idea of the task a repairer has to perform when he goes out in winter to find line trouble over this section of our system. I crossed this summit on July 10, and there were then from ten to fifteen feet of snow on the level; still the section from Eighth Cabin to north 'half-way' was in fairly good condition, thence on the northern side of the Naas summit to the Ninth Cabin the line is in rather bad condition; right of way is very narrow, and very brushy.

There are 327 tree poles and 109 set poles on this stretch.

Ninth Cabin to Echo Lake, 34·5 miles.

John Muir, operator, $100 per month with provisions.

George Hill, lineman, $3 per day with provisions.

These are two very good men, especially Hill, whose right of way is well cleared. The right of way from Echo Lake south is in bad shape; it has evidently not been cleared since construction. The present lineman has not been on this beat long enough to improve its condition. There are quite a number of bad slides from Ninth Cabin to the crossing of the Naas, about eight miles away, and the line should be built around them, thus preventing to a great extent the numerous winter interruptions. One especially, north of Owl creek, had to be repaired at once, as the line was down and in the river as we passed the place. As there were two repair parties on the line at the time, instructions were issued and the work done immediately. The south beat from nine miles south of Echo Lake is in bad shape. This piece of country is simply a succession of swamps, beaver dams and beaver meadows. Willows grow so thick and high that a way has to be hacked through, and most of the way the wire is out of view. From Echo Lake to nine miles south the line is again found to be in first class condition.

There are 831 tree poles and 96 planted poles on this stretch.

Echo Lake to Twenty-five Mile Cabin, 22·36 miles.

J. Patterson, operator, $100 per month with provisions.
K. Jepson, lineman, $3 per day with provisions.
This section is in good condition, timber becomes lighter, right of way wider and the trail is almost level.
There are 602 tree poles and 87 set poles on this stretch.

Twenty-five Mile Cabin to Iskoot Cabin, 16·71 miles.

F. E. Hawkins, operator, $100 per month and provisions.
J. Lowrie, lineman, $3 per day and provisions.
This section of the line is also in good condition, the country being level, and this is the best right of way so far.
There are 493 tree poles and 15 planted poles on this stretch.

Iskoot to Raspberry Creek, 27·11 miles.

W. P. Ball, operator, $100 per month and provisions.
W. Warnock, lineman, $3 per day and provisions.
Line, right of way and trail are in first class condition.
There are 505 tree poles on this stretch.

Raspberry Creek to Telegraph Creek, 30·84 miles.

This office is only occupied during the winter months.
There are 694 tree poles and 211 planted poles between Raspberry Creek and Telegraph Creek.

TELEGRAPH CREEK, B.C.

Telegraph Creek is a small trading post on the Stickine river, about 160 miles from its mouth. It contains two stores, a few dwellings and a telegraph office.
Following is the average yearly cost of maintaining our office at this point:—

	Salary per Year.	Board allowance.	Total.
	$ cts.	$ cts.	$ cts.
A. S. Gillespie, manager and operator	1,200 00	365 00	1,565 00
A. J. Charleson, line foreman	1,800 00	365 00	2,165 00
W. S. Simpson, lineman	900 00	365 00	1,265 00
Rent			120 00
Sundries			813 21
Total			5,928 21

GENERAL DESCRIPTION OF ROUTE FOLLOWED BY TELEGRAPH LINE.

Hazelton to Fifth Cabin.

Leaving Hazelton the line takes a general northerly direction as far as the Fifth Cabin. The country is well wooded and rather easily travelled.
The first and only village met is Kispiox, seven miles from Hazelton, on the north side of the Kispiox river. An Indian minister is located here, and there is a church and school. The line crosses the Kispiox at this point; span, 825 feet.

The first bad country is reached about four miles north of the Fourth Cabin, and is known locally as Babiche hill. This hill has always given a lot of trouble during the winter season; so has Poison mountain, which lies between Fourth and Fifth cabins.

In an effort to overcome the constant winter interruptions which took place on these sections, a cable totally unsuited for the purpose, as it was only insulated wire, mostly used for inside wiring for electric light purposes, was brought in, and some of it was laid on the ground without protection; a connection was never established, as it was supposed to have been damaged before it could be connected with the main wire. There are at present six coils of this cable at the 'half-way' south of the Fifth Cabin and one coil at the Fourth Cabin. This cable should be taken out on the return trip of the pack trains.

The cable which is now lying on the ground should be picked up, as it is very dangerous to horses and riders travelling along the trail owing to the loops and bights which act as regular snares.

Constant widening of the right of way is, in my opinion, the only cure for interruptions and would be permanent; in fact if the right of way were widened all along the line, so that falling timber could not reach the wire, where heavy timber grows, I am certain that a perfect service would be established.

Fifth Cabin to Ninth Cabin.

One mile and one-third north of Fifth Cabin, the construction work was abandoned in 1900. In 1901, the work was continued under the foremanship of Mr. A. Charleson, of New Westminster, B.C., under the direction of Mr. J. Y. Rochester, who was in charge of the work left undone in 1900. About two and one-half miles north of Fifth Cabin the line leaves the old cattle trail, which was once followed by people driving cattle to the north, and which here goes off in a more northerly direction while the line trends more to the northwest. From this neighbourhood the country along the line is the roughest so far encountered. The line runs between two very high mountain ranges, which become higher and higher as far as the summit of the Naas, where they join, forming the summit; consequently the work of keeping the line in order becomes more and more difficult. The trail is very rough, always wet and very steep. Here the men have to contend with rock and snowslides, apart from falling timber which had caused most trouble so far; miles of the line have been destroyed by a single slide.

In 1901, Mr. A. Charleson built and strung wire northwards to a point 11 miles and 246 feet north of the Sixth Cabin, where he was met by Mr. J. Y. Rochester's party, who were working southwards, and final and through connection was made on September 24, and Dawson was then connected by wire with the Canadian Pacific Railway telegraph system at Ashcroft.

Along this stretch of country the snowfall is very heavy, and the trees becoming subcharged with snow, tops break off, and falling on the wire break the line. A great number of interruptions are thus caused.

About 55 miles west of the Sixth Cabin the valley of the Kispiox river joins the valley of the south fork of the Naas river, and both run in almost a southerly and northerly direction from First to Ninth cabins. The distance is reported to be about 65 miles shorter than that covered by the line in its present location.

Ninth Cabin to 'Half-way' North.

The line on this stretch assumes a southwesterly direction, and as stated elsewhere in this report traverses a very wet, swampy country.

Ten miles and a half from Ninth Cabin the line crosses the Naas river; span, 585 feet.

All along this stretch, the snowfall is very heavy, causing a great deal of trouble.

'Half-way' North of Ninth Cabin to Echo Lake.

The line here assumes a west-northwest direction. The country quickly improves in character. About seven miles south of Echo Lake the line crosses the Ningunsaw river; span, 280 feet.

Echo Lake to Telegraph Creek.

About three miles north to Echo Lake, where the work was abandoned in 1900 by Mr. J. Y. Rochester and resumed by him in 1901, is practically the end of the difficult part of the construction.

From Echo Lake the line takes a more northerly direction, which it maintains as far as Telegraph Creek. The country keeps improving, getting drier, timber lighter, until the neighbourhood of Twenty-five Mile Cabin is reached, when the line enters a burnt-out area, which it follows to Telegraph Creek. The country is gently rolling, with an occasional deep ravine.

Snowfalls are heavy along these sections, so much so that some of the cabins are practically snowed under.

POLES.

Hazelton to Telegraph Creek.

	Distances.	Planted.	Trees.	Totals.
	Miles.			
Hazelton to First Cabin	27·33	137	584	721
1st to Second Cabin	27·7	94	427	521
2nd to Third "	18·6	110	330	440
3rd to Fourth "	14·86	111	252	363
4th to Fifth "	15·97	47	393	440
5th to Sixth "	16·69	44	408	452
6th to Seventh "	19·9	30	618	648
7th to Eighth "	18·83	3	380	383
8th to Ninth "	18·33	109	327	436
9th to Echo Lake	34·5	96	831	927
Echo Lake to 25-Mile Lake	22·36	87	602	689
25-Mile Cabin to Iskoot	16·71	15	493	508
Iskoot to Raspberry Creek	27·11	.....	505	505
Rasp. Cr. to Telegraph Creek	30·84	217	694	911
Total	303·83	1,100	6,844	7,944

These poles are all unpeeled fir, jackpine, black pine and spruce.

REFUGE HOUSES.

From Hazelton to Fifth Cabin refuges are located as near as possible to half-way between stations. From Fifth Cabin north owing to the more rugged country which the line traverses, the men in addition to the 'half-ways' have built themselves 'quarter-way' refuges. All these refuges are simply square log huts into which the wire is 'cut-in' for testing purposes.

TRANSPORTATION.

Supplies of all kinds, provisions, materials, &c., used on the line from Hazelton to the Ninth Cabin north, 172·21 miles, are taken from Vancouver and shipped on an ocean steamer to Port Essington, at the mouth of the Skeena river, 500 miles, there landed and reshipped on a river steamer and taken to Hazelton, B.C., about 165 miles, where they are again landed and turned over to a firm of packers, Barrett & Company, of Hazelton, who distribute them to their different destinations along the route.

To supply the stations from Telegraph Creek to Echo Lake, 97 miles, the route is from Vancouver to Fort Wrangell in Alaska, about 700 miles, transshipped to a river steamer, then up the Stickine river to Telegraph Creek, 185 miles, and there landed and turned over to Mr. J. F. Callbreath, who has our contract for packing.

On Saturday, June 9, my party was held at Second Cabin by an order from the government veterinary surgeon until an examination of the horses could be made owing to glanders having broken out among the cattle at Hazelton, where these horses had been procured. On Tuesday, June 12, three of the horses were shot, and the party allowed to proceed on its way.

Referring to the sections of the line which were not in good condition at the time inspected, I may say that there were two repair parties on the line, and the defects mentioned were rectified, putting in new poles where necessary, clearing right of way, chopping down leaning and dangerous trees which menaced the wire and doing general repairs.

On my return to Ottawa all detail changes or innovations which were thought to be needed on the line were communicated to you at headquarters by letters which are now on file in the department.

The map accompanying this report (not published) shows the telegraph line, telegraph offices along same, refuge houses, kind of timber growing in the neighbourhood, hilly or level country, and all information which was thought might be of use to the department. Distances given along the telegraph line are absolutely accurate, as the whole was chained during the course of the inspection.

I have the honour to be, sir,

Your obedient servant,

J. E. GOBEIL,

General Inspector, Yukon Telegraphs.

REPORT No. 12.

CABLE SHIP 'TYRIAN.'

Following is a statement of cables handled during the season of 1906:—

			Knots.	Knots.
July	11	Cable in tank from last year		·75
"	14	Picked up Bryon-Anticosti		17·00
"	20	Picked up in repair Magdalen Islands Cable		15·00
"	21	Paid out in above repair	16·91	
"	25	Picked up second attempt same cable		4·92
"	—	Paid out final repair	2·87	
"	28	Picked up Bryon-Grosse Isle Cable		1·20
"	—	Paid out same repair	·50	
Aug.	8	Gaspe-S. W. Point Cable, picked up		1·42
"	—	Same repair, Laid down	2·94	
"	16	Long Point-Anticosti picked up		5·05
"	16	Paid out, same repair	12·00	
"	24	Picked up of the Bryon-Heath Point Cable		41·10
Sept.	13	Laid at the St. François Landing (Isle of Orleans)	1·75	
"	15	Laid from Baie St. Paul to St. François	30·00	
"	26	Grosse Isle-Isle Reaux laid	·25	
"	28	Crane Island-Montmagny repair, laid	1·25	
Oct.	14	Long Point-Anticosti, removing leak, laid	3·66	
"	—	Same repair, picked up		1·86
"	23	St. Paul Island Cable picked up		2·91
"	—	Same repair, laid down	6·92	
"	30	Scatarie Island repair, laid down	·25	
Nov.	14	Petit Passage, laid	·55	
"	19	Cape Sable Island, laid	·50	
			80·35	91·21

The difference, 10·86 knots, on account of bad cable picked up, will be found to be short, nine knots of good cable on board.

Respectfully submitted,

A. B. McDONALD,

Electrician.

PART VI

REPORT OF THE COLLECTOR OF REVENUE

DEPARTMENT OF PUBLIC WORKS

1906-1907

F. GÉLINAS, Esq.,
Secretary,
Department of Public Works,
Ottawa, Ont.

SIR,—I have the honour of submitting my report for the nine months ended March 31, 1907.

Other pressing duties requiring my attention, I regret that I have been unable to examine, as usual, the books and accounts of the officers under my control.

During the nine months just closed the revenue accrued from public works shows an increase of $1,529.32, being $126,389.28, while for the previous year it was $124,-854.96.

The collections show a decrease of $5,564.41, being $124,057.47, while in the preceding year they amounted to $129,621.88.

The revenue accrued from slides and booms was $89,141.79 or $12,697.50 more than for year ended June 30, 1906.

The collections were $86,837.98 or $5,626.77 more than the previous year.

The outstanding uncollected revenue was increased by $2,298.81.

The graving docks yielded $30,652.79 or $13,414.88 less than in 1905-6.

Rents amounted to $6,589.70, an increase of $2,246.70.

Having dealt with the revenue in a general way, I now submit the particulars in detail, relative to the several services under their respective heads.

SLIDES AND BOOMS.

OTTAWA DISTRICT.

The tolls charged up amounted to $43,846.90 ; $5,899.21 more than in 1905-6.

The number of saw-logs that passed through the works was 4,185,118 pieces, or 312,012 pieces less than the previous year.

Last year, 1905-6, with a falling off in the revenue compared with the previous year the number of saw-logs was greater than in the preceding year, this I explained was largely attributable to the large quantity hung up in the Petawawa river, these latter having come out in addition to some others, contributed greatly to the increase in the revenue for 1906-7.

Of square timber, there were only 444 pieces—101 pieces less than 1905-6.

All the revenue accrued in this district during the nine months to March 31, last, was collected, except $3.29.

Of the dues accrued since July 1, 1889, when this department took over the collection, there remains uncollected $8,148.64, full particulars of which will be found in statement No. 2 herewith.

Of the dues accrued before July 1, 1889, there still remains $56,805.65—all of which should be written off. See statements Nos. 1 and 3 herewith for particulars.

The accounts for the Ottawa district stand thus:

Dues accrued during nine months to March 31, 1907	$43,846 90
Of which there has been collected	43,843 61
Dues accrued prior to the collection being transferred to this department July 1, 1889	56,805 65

Dues of 1889-90	$	6,903 05
" 1890-1		28 42
" 1892-3		379 80
" 1896-7		196 71
" 1903-4		637 37
" 1906-7		3 29
Total	$	8,148 64

Of the dues accrued since this department assumed the collection, $922,304.06, all but $31.71 absolutely coming to this department has been collected.

The increases and decreases from the different works, as compared with 1905-6 were as follows :—

Increase—

Petawawa	$	6,504 94
Coulonge		741 72
Gatineau		141 70

Decreases—

Main Ottawa		419 33
Cheneaux boom		269 76
Madawaska		323 85
Dumoine		53 50
Black river		422 71

Reverting to the matter of the number of pieces of saw-logs being smaller this year than last, I may say that a large quantity of small spruce, formerly classed as saw-logs in the returns, being now manufactured into pulp, is dealt with and charged by the cord of 115 cubic feet computed on the cubic contents of each piece.

Herewith are statements in detail :—

No. 1. Statement of amounts outstanding prior to July 1, 1889, uncollected June 15, 1907.

No. 2. Statement of dues accrued at Ottawa since July 1, 1889, uncollected June 15,1907.

No. 3. Statement of amounts accrued at Quebec prior to July 1, 1889, uncollected June 15, 1907.

No. 4. Statement of the number of pieces of square timber, saw-logs, &c., which passed through the Ottawa works during the nine months ended March 31, 1907.

No. 5. Statement of dues accrued from each of the slides and works in the Ottawa district during the nine months ended March 31, 1907.

ST. MAURICE DISTRICT.

The revenue from this district was $41,334.16, being $4,233.14 more than in 1905-6, and the largest in the history of these works.

Of the revenue of 1906-7, $41,324.16 was collected, $5 was written off and $5 remains uncollected, the return for the latter came to me too late to reach the parties who, I understand, reside in Buffalo, N.Y.

The number of pieces of all kinds of timber that passed through the works was equivalent to 4,160,220 saw and pulp logs.

Since I took charge of this district in 1892, all the revenue but $5 above mentioned has been collected.

The amount outstanding prior to July 1, 1892, remains at the same figure, viz., $14.486.49, and should be written off, for reasons assigned in statement No. 6 herewith.

I anticipate a very substantial increase in the revenue again this year, 1907-8, although the spring opened unfavourably yet in May the water began to come up, and

I expect the quantity left in the small streams will be very much less than last year. The St. Maurice being very low at the opening of navigation, the booms at Three Rivers were in position in good time and not one log was lost.

The alligator tugs continue to give great satisfaction, and it is daily being realized what an advantage it is to have the aid of these machines, in fact I venture to say that it would be next to impossible to handle the immense number of logs now coming down this river without them.

I would again urge the adoption of a system of water storage on the tributaries of the St. Maurice; last year the business was almost paralyzed for want of water on this river, yet on the Trent waters, where there is a storage system, they had a splendid supply all through the year, the Great Lakes of the Manouan and on other tributaries of the St. Maurice would supply a vast quantity of water, if shut off in the spring, and dams opened under careful management at times, when the water had fallen in the main river below normal summer level.

The establishment of such a system would not be beneficial only to the lumbermen, it is almost as great a necessity to the interest of the government, in the first place, the safe conveyance of the timber to the mills, means a good revenue, and secondly, holding back the waters, as proposed, in the spring would tend largely to prevent such freshets as have occurred in the past when, as on one occasion, all the works in the river were swept away by the flood.

NEWCASTLE DISTRICT.

The dues accrued from this district amounted to $1,670.21, all of which was collected; increase, $274.63.

The tolls outstanding on March 31, 1907, amounted to $3,556.89, of which $3,521.19 should be written off in accordance with a judgment of the Exchequer Court, the remainder $35.70, will also have to be written off, the debtor being a very old man and hopelessly insolvent.

Full particulars of amount outstanding will be found in Statement No. 7 herewith.

Since July 1, last, all the works formerly controlled by this department in the Trent waters were transferred to the Department of Railways and Canals, except the booms and slides at Fenelon Falls and slide, booms and dam at Burleigh Falls, which being exclusively for the convenience of the lumber trade were retained by this department.

Therefore, for many years to come, I am confident that the revenue will be fully sufficient to cover cost of maintenance and repairs.

SAGUENAY DISTRICT.

The revenue accrued during the past fiscal term was $2,290.52. None of which has yet been collected.

The Chicoutimi Pulp Company are under contract with the department to contribute any deficiency which may occur between the cost of maintenance and the amount realized from tolls on timber passing through the Saguenay boom. The tolls for 1906 are amply sufficient to cover cost of maintenance, hence the company has been only called upon to pay the tolls fixed by order in council.

The company, however, dispute their liability on the ground that the boom was not completed till late in the season of 1906 and the matter is as yet unsettled.

There is also a counter claim for timber lost through the boom not being ready when expected, thus the timber passed down the river and was a total loss to the owner. The amount involved, however, is but $56.57, and the quantity of timber so lost was over 800 pieces of 20 feet and upwards in length.

Statement No. 8, herewith shows the particulars of the revenue from this district.

GRAVING DOCKS.

ESQUIMALT GRAVING DOCK.

The revenue from this service was $19,627.04, the largest for a great many years and $5,258.92 more than in 1905-6. Of the 144 days the dock was used during the nine months, it was occupied for only seventeen days by His Majesty's vessels.

For full details see Statement No. 9 herewith. As a much larger class of vessels is now employed in the coasting trade, special provision has to be made at the dock to accommodate them, hence, a revision of the regulations and tariff will shortly be submitted for the approval of the Governor General in Council.

LÉVIS GRAVING DOCK.

The revenue was $13,056.06 less than for the year 1905-6, being only $6,659.82. See statement No. 10.

From July 1 to November 30 the dock was only occupied for ninety-four days, of which but one sea-going steamer was in for only nine days, for the remainder of the time there were only one government steamer, one dredge and the steamer *Quebec*.

KINGSTON GRAVING DOCK.

This dock was occupied for thirty-six days, exclusive of winter months. The income for the nine months was $4,365.93 or $5,617.74 less than in 1905-6. See statement No. 11.

The steamer *Fairmount* wintered in this dock, occupying it for 107 days.

RENTS.

All the rents accrued amounting to $6,589.70 was collected but $23. This total being $2,246.70 more than in 1905-6.

The work of this office has been very much increased in securing the rents from the properties lately acquired by the government on Sussex street and McKenzie avenue. This branch of our business requires much time, in investigating claims for remission on many grounds and claims for repairs or privileges said to have been promised by the previous owner.

The collections on this account were as follows :—

Property or Privilege Rented.	Rent Accrued.	Uncollected.
	$ cts.	$ cts.
Old P.O. Building, Victoria, B.C.	3,114 00	
Sussex Street property, Ottawa, Ont	2,568 70	23 00
Portion Kingston Graving Dock premises	187 50	
Pt. Reserve, Victoria Island, Ottawa	2 00	
Reserve, east side St. Maurice River	50 00	
Wooden structures, Cape Tormentine, N.B.	1 00	
Privilege of erecting towers in Burlington Beach	1 00	
Island and water power, Calumet Channel, P.Q.	12 50	
Pt. Reserve, Pond Creek, P.Q.	1 00	
Pt. Reserve, west side Black River, P.Q.	25 00	
Ile Caron, P.Q.	75 00	
Tramway on Breakwater, Goderich, Ont.	5 00	
Pt. Public Building, Drummondville, P.Q.	112 00	
Old Govt. House, Yale, B.C.	5 00	
Privilege water pipe connection, William Head, B.C.	12 00	
Portion Immigration Building, Port Arthur, Ont.	90 00	
Building at Glace Bay, C.B.	28 00	
Pt. Temporary P.O. Premises, Toronto	300 00	
	6,589 70	23 00

The following comparative table of Public Works Revenue accrued during nine months ended March 31, 1907, compared with that of the fiscal year ended June 30, 1906, shows at a glance in what accounts increases and decreases herein reported have occurred :—

—	9 Mos. to March 31, 1907.	Year 1905–1906.	Increase, 1907.	Decrease, 1907.
Slides and Booms.	$ cts.	$ cts.	$ cts.	$ cts.
Ottawa District	43,846 90	37,947 69	5,899 21	
St. Maurice District	41,334 16	37,101 02	4,233 14	
Newcastle District	1,670 21	1,395 58	274 63	
Saguenay District	2,290 52		2,290 52	
	89,141 79	76,444 29	12,697 50	
Graving Docks.				
Esquimalt, B.C.	19,627 04	14,368 12	5,258 92	
Levis, Que	6,659 82	19,715 88		13,056 06
Kingston, Ont	4,365 93	9,983 67		5,617 74
	30,652 79	44,067 67	5,258 92	18,673 80
Net decrease in 1906–7	13,414 88			
Rents	6,589 70	4,343 00	2,246 70	

Total increase dues accrued 1906-7 ..... $ 1,529 32

Collections—nine months to March 31, 1907—

From slides and booms	$ 86,837 98
From graving docks	30,652 79
From rents	6,566 70
Total	$124,057 47

Decrease in collections, 1906-7 ..... $ 5,564 41

In conclusion I have to acknowledge the uniform courtesy and cheerful assistance accorded me at all times by the officers with whom I have been brought in contact during the year.

I have the honour to be, respectfully, sir,

Your obedient servant,

EDW. T. SMITH.

No. 1.—Statement of Slidage and Boomage from the Ottawa Slides and Works, accrued prior to July 1, 1889, Outstanding March 31, 1907, and remaining uncollected on June 15, 1907.

By whom due.	Bad and Doubtful Debts.	Chaudiere Boomage in Suspense.	Other Slide and Boom Dues Disputed.	Total Outstanding on Sept. 30, 1902.	Year to which Dues Belong.	Remarks.
	$ cts.	$ cts.	$ cts.	$ cts.		
John & Wm. McLean	53 14			53 14	1873	Insolvent.
John Rowan	342 50			342 50	1872-1873	"
Lemieux & Charrette	21 30			21 30	1873	"
Taillon & Lapierre	148 10			148 10	1873-1874	"
Mosgrove & McHarry	261 42			261 42	1873-1874	"
W. C. Wells	600 90			600 90	1873-1874	"
Dufresne & McGarity	528 80			528 80	1874-1875	"
Walton Smith	171 46			171 46	1874-1875	"
A. H. Baldwin	3,507 92			3,507 92	1871 to 1874	"
Hon. James Skead	9,807 65			9,807 65	1861, 1863, 1864, 1869, 1875 to 1878	"
Batson & Currier	5,558 70			5,558 70	1875 to 1877	"
A. F. A. Knight	546 30			546 30	1878	"
James Walker	11 25			11 25	1877	"
R. Campbell & Son	1,558 50			1,558 50	1879 to 1881	"
James G. Bryson	73 50			73 50	1886	"
Costello Bros.	90 62			90 62	1882	"
N. E. Cormier	428 34			428 34	1888	"
James Yuhill	9 29			9 29	1876	Overcharge.
J. & B. Grier	76 84			76 84	1883	"
R. & W. Conroy	95 42			95 42	1882-1883	" reported in return S—38, for March, 1886.
A. P. White	101 00			101 00	1881	"
B. Caldwell & Son	4 33			4 33	1887	"
J. R. Booth		9,871 92	398 88	10,270 81	1881 to 1888	$398.88, counter claim for damages by the breaking of Coulonge Boom.
Perley & Pattee		8,889 85		8,889 85	1881 to 1888	
The Bronson & Weston Lumber Co.		8,180 79		8,180 79	1881 to 1888	
Pierce & Co		462 18		462 18	1888	
G. A. Grier & Co		1,060 59		1,060 59	1886-1887	*Chaudiere boomage. These parties claim that they have maintained these works wholly at their own expense since 1881.
Estate late Levi Young		1,461 20		1,461 20	1881 to 1885	
Wm. Mason		413 85		413 85	1881 to 1888	
Gilmour & Co		406 27		406 27	1884	
John Rochester		258 88		258 88	1881 to 1883	
J. & G. Bryson			252 20	252 20	1886	Counter claim for damage by breaking of Coulonge Works.
	23,997 28	31,006 54	651 08	55,653 90		

Department of Public Works,
Ottawa, June 15, 1907.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

No. 2.—Statement of Slide and Boom Dues accrued from the Ottawa River Works, since July 1, 1889, Outstanding on March 31, 1907.

Name.	Year to which Dues belong.	Chaudière Boomage in Suspense.	Ordinary Dues.	Total Outstanding	Remarks.
		$ cts.	$ cts.	$ cts.	
J. R. Booth	1889-90	2,561 69		2,561 69	Chaudière boomage reported to Council, and referred to Treasury Board, should be written off.
The Bronsons & Weston Lumber Co.	1889-90	2,056 96		2,056 96	
Perley & Pattee	1889-90	1,203 26		1,203 26	
Wm. Mason & Sons	1889-90	167 66		167 66	
Pierce & Co	1889-90	913 48		913 48	
Alex. Fraser, acct. Thos. Stephens	1890-91		28 42	28 42	Legal action taken to recover this.
J. R. Booth	1892-93		379 80	379 80	Retained by Mr. Booth in settlement of an account due him, which the Auditor General refuses to pay, as Mr. Booth appeared to be in arrears in this and Statement No. 1.
Bryson & Fraser	1896		196 71	196 71	Have counter claim for work done on slide to this amount.
J. R. Booth	1903		339 27	339 27	
Hawkesbury Lumber Co	1903		298 10	298 10	Petawawa slidage disputed.
R. H. Klock & Co	1906		2 07	2 07	
Estate A. Lumsden	1906		1 22	1 22	
		6,903 05	1,245 59	8,148 64	

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

Department of Public Works,
Ottawa, March 31, 1907.

No. 3.—STATEMENT of Outstanding Slide Dues, Ottawa District, Bonds for which were sent to Quebec for Collection.

Name.	From 1860.	From 1861.	Total.
	$ cts.	$ cts.	$ cts.
Hon. James Skead	245 00	210 00	455 00
James Mair	....	696 75	696 75
	245 00	906 75	1,151 75

These amounts were uncollected, as the parties claimed damages for loss caused by the Madaswaska boom breaking in 1860.

A decision on their claims was not arrived at till August 2, 1869. On the 5th idem Messrs. Skead and Mair were notified that the department could not recognize their claim.

To the best of my knowledge, this decision was never communicated to the collector of slide dues, consequently these accounts remained in abeyance.

Since then both parties died, and I believe both were insolvent at the time of their death.

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, June 15, 1907.

No. 4.—STATEMENT of the number of pieces of square timber, saw logs, &c., that passed through the government slides and works on the River Ottawa and its tributaries during the fiscal year ended March 31, 1907.

	Pieces.
Square timber	444
Saw logs	4,185,118
Boom and dimension timber	74,859
Cedars	45,951
Railroad ties	360,984
Fence posts	99,552
Total	4,766,908

Also 33,948·99 cords of pulp wood.

The revenue accrued on the above was $43,846.90.

EDWARD T. SMITH,
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, June 15, 1907.

No. 5.—STATEMENT showing the dues accrued on the undermentioned works on the River Ottawa and tributaries during the fiscal year ended March 31, 1907.

River or other improvement.	Amount.
Main Ottawa	$ 2,098 98
Cheneaux boom	7,267 54
River Petawawa	11,445 25
River Madawaska	1,493 56
River Coulonge	7,873 36
River Dumoine	187 39
Black river	6,117 27
Gatineau	7,363 55
	$43,846 90

Amounting to $43,846.90.

EDWARD T. SMITH,
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, June 15, 1907.

No. 6.—STATEMENT of Slide and Boom Dues from the St. Maurice Slides and Works outstanding on March 31, 1907, and remaining uncollected on June 15, 1907.

Name.	Year to which Dues belong.	Amount.	Total.	Remarks.
		$ cts.	$ cts.	
George Baptist, Son & Co.	1878	469 95		
" ..	1879	2,110 62		
" ..	1880	1,656 18		
" .	1881	293 69		Have counter claims for damages to logs caused by the booms not being stretched early enough in the spring of 1878 to prevent the logs going over the chutes.
" ..	1882	165 80		
" ..	1884	118 50		
" ..	1888	4 28		
			4,859 02	
Ross, Ritchie & Co. . .	1878	3,072 84		The claims were submitted to Special Commissioner, Mr. McDougall, afterwards Judge, who, after hearing the evidence on both sides, recommended that the claims of the parties should be allowed.
"	1883	2,173 68		
" ...	1884	28 96		
"	1886	1 62		
"	1887	4 38		
			5,281 48	
Alex. Baptist.....	1879	.....	2,116 96	
Wm. Ritchie & Co.....	1888	779 24		
"	1889	332 11		
			1,111 35	Of this amount $754.20 is claimed to be an overcharge. Insolvent.
Ritchie Bros	1886	413 43		
"	1887	634 71		
			1,048 14	This amount is composed of overcharges in 1886 and 1887 of $842.76 and overpayment in 1884 of $205.38.
G. B. Hall.....	1890	.....	49 34	Insolvent.
T. E. Normand.....	1890	.....	42 28	Claims that this balance is an overcharge.
Treffle Biron.....	1891	.. ..	0 92	Would cost more to collect than it is worth.
		.....	* 14,481 49	
Bailey, Johnson and Saunders..... ...	1906	5 00	5 00	
		. .....	14,486 49	

*To make this balance agree with the Public Accounts, there should be deducted $7.93 over credited Alex. Baptist, and $217.17 added thereto, being $190.40 paid July 23, 1884, and $26.77 overcharged in error to Wm. Little, not in any of the collector's returns, which will give balance due September 30, 1894, of $14,690.73.

EDWARD T. SMITH,
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, June 15, 1907.

No. 7.—STATEMENT of Slides and Boom Dues accrued from the Newcastle and Trent River Works, outstanding on March 31, and remaining uncollected June 15, 1907.

Name.	Year to which Dues belong.	Amounts disputed.	Ordinary Dues.	Total.	Remarks.
		$ cts.	$ cts.	$ cts.	
Irwin & Boyd	1881	59 79		59 79	Insolvent.
Thomson & McArthur	1880	52 78		52 78	
Jabez Thurston	1882	12 50		12 50	
McDougall & Ludgate	1879	65 07		65 07	
Bigelow & Trounce	1882 to 1885	216 21		216 21	
R. G. Strickland	1882, '83, '85, '86 and '87	215 08		215 08	
Est. late Geo. Hillard	1877 to 1883 and 1886	354 15		354 15	Dead and estate distributed.
T. G. Hazlett	1881, '82, '84 to '89	885 25		885 25	According to judgment in Exchequer Court, *re* Boyd *vs.* Smith, these cannot be collected.
J. M. Irwin	1882, '83, '85 to '88	698 45		698 45	
D. Ullyot	1881 to 1887	547 68		547 68	
Green & Ellis	1881 to '83, '85, '88, and '89	157 01		157 01	
A. W. Parkin	1884, '85, '88, '90, and '91	65 92		65 92	
The Dickson Estate	1883	137 50		137 50	
Alfred McDonald	1888	40 80		40 80	
John Parkin	1889	13 00		13 00	
John Dovey	1894, '95, '96		35 70	35 70	Sent to Dept. of Justice for collection.
		3,521 19	35 70	3,556 89	

EDWARD T. SMITH,
Collector Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, June 15, 1907.

No. 8.—STATEMENT of Slide and Boom Dues from Saguenay Works, Outstanding on March 31, 1907, Uncollected June 15, 1907.

Name.	Year to which Dues belong.	Amount.	Remarks.
		$ cts.	
La Cie de Pulpe de Chicoutimi	1906	2,233 85	Disputed.
Jos. Vachon	1906	56 67	"
		2,290 52	

EDWARD T. SMITH,
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, June 15, 1907.

No. 9.—DRY DOCK AT ESQUIMALT, B.C.

STATEMENT of Dues and other charges collected during the Year ended March 31, 1907.

Name of Vessel Docked.	Tonnage.	Period of Dockage. From.	Period of Dockage. To.	Dockage Charges.	Other Charges.	Total.
		1906.	1906.	$ cts.	$ cts.	$ cts.
S.S. 'Mariechen'	3,930	July 1..	Aug. 7..	4,403 00	30 60	4,433 60
S.S. 'Water Lilly'	.....	" 1..	" 7..	.....	7 50	7 50
S.S. 'Indiana'	3,335	Aug. 8..	" 11..	614 00	184 20	798 20
Bk. 'Battle Abbey'	3,483	" 17..	" 18..	400 00	1 40	401 40
S.S. 'Pondo'	2,741	" 31..	Sept. 1..	400 00	.....	400 00
Ship 'Lisbeth'	2,346	Sept. 2..	" 4..	487 00	.....	487 00
S.S. 'Twickenham'	4,221	" 13..	Oct. 21..	5,025 00	319 20	5,344 20
S.S. 'Henley'	3,249	Oct. 23..	" 26..	610 00	16 80	626 80
S.S. 'Elleric'	3,570	Nov. 5..	Nov. 7..	512 00	22 80	534 80
Ship 'Elisa Lihn'	2,245	" 7..	" 9..	485 00	2 40	487 40
S.S. 'Strathnairn'	4,350	" 9..	" 11..	527 00	2 40	529 40
S.S. 'Jeanie'	1,071	" 22..	" 23..	350 00	.....	350 00
H.M.S. 'Egeria'	940	" 31..	Dec. 8..	408 21	.....	408 21
S.S. 'Ramses'	3,582	Dec. 12..	" 13.	400 00	.....	400 00
S.S. 'Gymeric'	4,002	" 29	Jan. 1,'07..	642 00	.....	642 00
		1907.	1907.			
H.M.S. 'Shearwater'	980	Jan. 16..	Jan. 23..	315 13	.....	315 13
S.S. 'Salatis'	5,142	" 25..	" 26..	543 00	.....	543 00
Cable Ship 'Restorer'	3,180	Feb. 5.	Feb. 13..	1,128 00	53 40	1,181 40
D.G.S. 'Kestrel'	.....	.....	.....	.....	2 40	2 40
S.S. 'Sai'	4,298	Mar. 2..	Mar. 4..	526 00	4 80	530 80
S.S. 'Hermonthis'	4,782	" 11..	" 12 .	400 00	6 60	406 60
— 'Tottenham'	4,494	" 21..	" 25..	790 00	7 20	797 20
	65,941			.....	.....	19,627 04

EDWARD T. SMITH,
Collector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, June 15, 1907.

No. 10.—Statement of Dues and other charges collected during the nine months ended March 31, 1907.

Name of Vessel Docked.		Tonnage.	Period of Dockage. From.	Period of Dockage. To.	Dockage Charges.	Other Charges.	Total.
			1906.	1906.	$ cts.	$ cts.	$ cts.
S.S. 'La Canadienne'	5	372	Aug. 13..	Aug. 17..	374 40	.....	374 40
Dredge 'Galveston'	13	1,267	" 23..	Sept. 4..	1,034 18	.....	1,034 18
Str. 'Quebec'		.....	Entry Fee	.. ..	... ...	.....	200 00
S.S. 'Kensington'	9	8,669	Nov. 22..	Nov. 30..	2,187 04	13 50	2,200 54
Str. 'Quebec'	67	832	Sept. 8..	" 13..	3,045 60	5 10	2,850 70
	94	11,140			6,641 22	18 60	6,659 82

EDWARD T. SMITH,
Collector of Public Works Revenue.

Department of Public Works,
Ottawa, June 15, 1907.

No. 11.—THE DRY DOCK AT KINGSTON, ONT.

STATEMENT of Dues and other Charges collected during the nine months ended March 31, 1907.

Name of Vessel Docked.	Tonnage.	Period of Dockage. From	Period of Dockage. To	Dockage Charges.	Other Charges.	Total.
		1906.	1906.	$ cts.	$ cts.	$ cts.
Str. 'Ramona'	57	July 9..	July 9.	20 00		20 00
Str. 'Arundell'	339	" 10..	" 10..	67 80		67 80
Str. 'Castanet'	54	" 22..	" 23..	20 00		20 00
Barge 'Ceylou'	908	" 26..	" 28..	267 92	10 50	278 42
Str. 'Resolute'	372	" 29..	" 30..	74 40	5 00	79 40
Str. 'Business'	985					
" cargo	1,000	Aug. 3..	Aug. 4..	248 50		248 50
Str. 'New Island Wanderer'	123	" 7..	" 8..	24 60		24 60
Gov. 'Dredge Montague'	253	" 11..	" 14..	100 60	21 00	121 60
Sch. 'Acacia'	188	" 20..	" 21..	37 60		37 60
Str. 'Tecumseh'	840	" 24..	" 25..	134 00		134 00
Yacht 'Skylark'	43	" 29..	" 30..	20 00		20 00
Str. 'Aletha'	171	" 31..	Aug. 31..	34 20		34 20
Tug 'H. F. Bronson'	137	Sept. 13..	Sept. 14..	27 40		27 40
Sch. 'Flora Calvert'	190	" 27..	" 27..	38 00		38 00
Str. 'Henry B. Hall'	1,152	Oct. 15..	Oct. 17..	245 84		245 84
Str. 'Avon'	1,417	" 20..	" 23.	390 08	5 00	395 08
Str. 'John C. Howard'	1,244	" 26.	" 27..	174 40	5 00	179 40
Barge 'Augustus'	802	" 29..	" 30..	130 20	5 00	135 20
Str. 'Bickerdike'	1,945	Nov. 4..	Nov. 6..	380 65		380 65
Govt. Str. 'Scout'	196	" 6..	" 8..	59 20		59 20
Str. 'City of New York'	292	" 10..	" 11..	58 40		58 40
" "	292	" 12..	" 14..	78 84		78 84
Tug 'Emerson'	276	" 22..	" 23..	55 20		55 20
Barge 'Muskoka'	481	" 27..	" 28 .	96 20		96 20
Str. 'City of Montreal'	1,554	Dec. 4..	Dec. 6..	205 40		205 40
Str. 'Fairmount'	1,895	" 12..	" 13..	239 50	10 50	250 00
"		Entrance fee—winter dockage.				100 00
		1906.	1907.			
"	1,895	Dec. 13..	Mar. 30..	1,070 00	5 00	975 00
	19,101			4,298 93	67 00	4,365 93

EDWARD T. SMITH,
Colector of Public Works Revenue.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, June 15, 1907.

PART VII

MISCELLANEOUS

ACTS OF PARLIAMENT, PASSED AT SESSION OF 1907, HAVING REFERENCE TO THIS DEPARTMENT.

CONTRACTS LET BY THIS DEPARTMENT.

PROPERTY PURCHASED OR SOLD.

PROPERTY, LEASED TO OR BY THE DEPARTMENT.

CURATOR'S REPORT, NATIONAL ART GALLERY.

NAMES OF CHIEF OFFICERS OF THE DEPARTMENT.

NAMES OF OFFICIALS EMPLOYED ON SLIDES AND BOOMS.

NAMES OF PERSONS EMPLOYED ON GRAVING DOCKS.

NAMES OF ENGINEERS, FIREMEN AND CARETAKERS OF PUBLIC BUILDINGS.

AND THE OFFICIAL CORRESPONDENCE OF THE DEPARTMENT.

FOR THE

FISCAL YEAR ENDED MARCH 31, 1907

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, October 1, 1907.

SIR,—I beg to transmit herewith the following statements concerning the transactions of the department from July 1, 1906, to March 31, 1907, with respect to contracts and properties, and which are required for insertion in the annual report for the period above-mentioned, viz.:—

No. 1.—Statement of contracts let by this department from July 1, 1906, to March 31, 1907.

No. 2.—Statement of property purchased and sold by the said department during the same period.

No. 3.—Statement of property leased to and by the said department, during the same period; and

No. 4. A list of some of the Public Acts of the Parliament of Canada, passed at the last session and having reference to the department.

I have the honour to be, sir,
Your obedient servant,

J. A. CHASSE,
Law Clerk.

FRED. GÉLINAS, Esq.,
Secretary, Department of Public Works,
Ottawa.

STATEMENTS

SHOWING

1ST.—CONTRACTS LET BY THE DEPARTMENT OF PUBLIC WORKS OF CANADA, FROM JULY 1, 1906, TO MARCH 31, 1907.

2ND.—PROPERTY PURCHASED OR SOLD BY THE DEPARTMENT OF PUBLIC WORKS DURING THE FISCAL YEAR ENDED MARCH 31, 1907.

3RD.—PROPERTY LEASED TO AND BY THE DEPARTMENT OF PUBLIC WORKS DURING THE FISCAL YEAR ENDED MARCH 31, 1907.

No. 1.—CONTRACTS let by the Department of Public Works of Canada from the 1s July, 1906, to the 31st March, 1907.

Works.	Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS.			$ cts.
Nova Scotia.			
Amherst, Post Office. Supply of coal	Maritime Coal, Ry. & Power Co.	Sept. 20, 1906	259 92
Annapolis, Post Office. Supply of coal	Canada Coal & Ry. Co.	" 17, 1906	184 49
Antigonish, Post Office. Supply of coal	Chs. W. Ives	" 18, 1906	107 63
" Post Office. Fittings	Rhodes, Curry & Co.	Dec. 10, 1906	3,350 00
Arichat, Post Office. Supply of coal	B. Gerroir	Sept. 18, 1906	150 30
Baddeck, Post Office. Supply of coal	The Cape Breton Coal Mining Coal Co	" 18, 1906	170 20
Canso, Public Building. Heating apparatus	James Reid	Nov. 12, 1906	1,200 00
" Public Building. Fittings	Chappell Bros. & Co., Ltd.	Feb. 7, 1907	1,890 00
Dartmouth, Post Office. Supply of coal	Mabou & Gulf Coal Co., Ltd	Sept. 20, 1906	77 00
Digby, Post Office. Supply of coal	Wm. E. Blarcon	" 29, 1906	225 00
Guysborough, Post Office. Supply of coal	A. J. O. Maguire	Oct. 11, 1906	174 55
Halifax, Asst. Rec. Gen'l. Off. Supply of coal	Mabou & Gulf Coal Co., Ltd	Sept. 20, 1906	36 00
" Asst. Rec. Gen'l. Off. Supply of coal	S. Cunard & Co.	" 17, 1906	25 55
" Dom. Building. Supply of coal	Hugh D. Mackenzie	" 15, 1906	417 19
" New Custom House. Supply of coal	"	" 15, 1906	218 77
" Immigration Building. Supply of coal	"	" 15, 1906	391 00
" Detention Hospital. Supply of coal	"	" 15, 1906	113 30
" Examining Warehouse. Supply of coal	"	" 15, 1906	170 00
" Custom House. Electric elevator	Wm. Malloch & Co.	Aug. 1, 1906	3,560 00
" Lawlor's Island Hospital. Heating apparatus.	Rhodes, Curry & Co.	Nov. 2, 1906	1,025 00
" Detention Hospital. Heating apparatus	Martel & Langelier	Jan. 12, 1907	3,300 00
" Custom House. Painting	Frank Reardon	" 28, 1907	2,360 00
" Detention Hospital. Wiring	S. A. Marshall & Son	Feb. 2, 1907	1,800 00
" Custom House. Tower clock	C. G. Shulze	July 25, 1906	2,000 00
" Custom House. Heating apparatus	Longard Bros	Feb. 28, 1907	1,259 00
Inverness, Construction of a Public Building	E. F. Munro	July 28, 1906	14,559 00
Kentville, Public Building. Supply of coal	James Kenna	Sept. 19, 1906	
" Post Office. Supply of coal	Canada Coal & Ry. Co.	" 17, 1906	101 33
Liverpool, Post Office. Supply of coal	I. V. Dexter	" 24, 1906	180 00
Lunenburg, Post Office. Supply of coal	John B. Young	" 17, 1906	204 75
New Glasgow, Post Office. Alterations and fittings	D. Holmes	July 3, 1906	994 00
" Post Office. Supply of coal	Chs. W. Ives	Sept. 18, 1906	207 78
North Sydney, Post Office. Supply of coal	The Cape Breton Coal Mining Co., Ltd	" 18, 1906	228 80
" "	"	" 18, 1906	204 00
Pictou, Custom House and Post Office. Supply of coal	R. S. Lowe	Aug. 3, 1906	890 00
" Public Building. Sidewalks	Cumberland Ry. & Coal Co.	Sept. 22, 1906	206 40
Springhill, Post Office. Supply of coal	Thomas Routledge	" 16, 1906	326 00
Sydney, Post Office. Supply of coal	Angus McLean	Oct. 2, 1906	135 00
Sydney Mines, Post Office. Supply of coal	Sydney Coal Company	" 2, 1906	6 00
" Post Office. Supply of coal	W. A. Mackay & Co.	July 9, 1906	500 00
" Public Building. Electric wiring	Chs. W. Ives	Sept. 18, 1906	239 63
Truro, Post Office. Supply of coal	Fred. W. Dimock	" 15, 1906	271 43
Windsor, Post Office. Supply of coal	E. Baker & Co.	" 19, 1906	369 00
Yarmouth, Post Office. Supply of coal			
Prince Edward Island.			
Charlottetown, Dominion Building. Supply of coal	A. Pickard & Co.	Sept. 17, 1906	618 26
" Dominion Building. Supply of coal	Peake Bros. & Co.	" 17, 1906	53 11
Montague, Post Office. Supply of coal	Geo. Wightman	" 17, 1906	107 16
" Post Office. Supply of coal	A. Pickard & Co.	" 17, 1906	138 18
Souris, Public Building. Granolithic sidewalks, &c	F. S. Macdonald	Nov. 24, 1906	1,086 00
" Public Building. Fittings	Mark Wright Furnishing Co	Mar. 27, 1907	1,718 00
Summerside, Post Office. Supply of coal	R. T. Holman, Ltd	Sept. 15, 1906	351 83
New Brunswick.			
Bathurst, Post Office. Supply of coal	B. M. Lannegan	Sept. 17, 1906	300 58
Campbellton, Post Office. Supply of coal	Chs. Powell	Oct. 10, 1906	333 68
Chatham, Post Office. Supply of coal	Ed. Johnson	Sept. 17, 1906	160 00
" Post Office. Supply of coal	Minudje Coal Co., Ltd	" 25, 1906	222 81
Dalhousie, Post Office. Supply of coal	Chs. Powell	Oct. 10, 1906	287 95
Fredericton, Post Office. Supply of coal	Pat. Farrell	Sept. 14, 1906	248 55
Marysville, Post Office. Supply of coal		" 14, 1906	18 28
Moncton, Post Office. Supply of coal	Minudie Coal Co., Ltd	" 25, 1906	266 29
Newcastle, Post Office. Supply of coal	" "	" 25, 1906	174 60
" Post Office. Supply of coal	Geo. S. Stothart	" 22, 1906	177 26
Richibucto, Post Office. Supply of coal	J. & T. Jardine	Oct. 5, 1906	195 00
St. John, Custom House. Long room, oak screen	F. S. Heans	July 8, 1906	1,065 00
" Custom House. Supply of coal	R. P. & W. F. Starr	Sept. 14, 1906	1,634 61
" Custom House. Supply of coal	Vroom & Arnold	" 14, 1906	36 86

No. 1.—Contracts let by the Department of Public Works, &c.—*Continued.*

Works.	Names of Contractors.	Date of Contract.	Amount.
			$ cts.
Public Buildings—*Continued.*			
New Brunswick—Concluded.			
St. John Post Office, West Carleton. Supply of coal.	R. P. & W. F. Starr	Sept. 14, 1906	51 65
" Post Office, City. Supply of coal	" "	" 14, 1906	740 34
" Savings Bank. Supply of coal	" "	" 14, 1906	260 42
" Immigration Building. Supply of coal	" "	" 14, 1906	1,004 15
St. Stephen, Post Office. Supply of coal	W. C. Purves	" 15, 1906	150 00
Sussex, Post Office. Supply of coal	Arthur Keith	" 17, 1906	338 20
Tracadie, Lazaretto. Supply of coal	B. M. Lannegan	" 17, 1906	486 64
Woodstock, Post Office. Supply of coal	W. F. Dibblee & Son	" 15, 1906	166 84
" Armoury. Furniture and fittings	Henderson Furniture Co	" 19, 1906	3,500 00
" Public Building. Supply of electric cur'nt	The Woodstock Elec. Ry. & Power Co	July 25, 1906	per qr. 40 00
Quebec.			
Acton Vale, Post Office. Supply of coal	S. E. Desmarais & Co	Oct. 15, 1906	126 56
Aylmer, Post Office. Supply of coal	The C. C. Ray Co., Ltd	Sept. 11, 1906	216 54
Berthier (en haut), Public Building. Alterations to	Chs. Marcoux estate	Jan. 5, 1907	485 53
Berthierville, Post Office. Supply of coal	F. O. Lamarche	Oct. 15, 1906	95 84
Buckingham, Public Building. Supply of coal	E. M. Lapierre	Sept. 21, 1906	134 28
Chicoutimi, Public Building. Wiring	Adolphe Beaulieu	Oct. 31, 1906	1,125 00
" Public Building. Heating apparatus	Ovide Guay	Mar. 11, 1907	1,725 00
Coaticook, Post Office. Supply of coal	W. C. Webster & Son	Sept. 14, 1906	260 30
Drummondville, Post Office. Supply of coal	Elie Nap. Turner	" 18, 1906	120 00
Dundee, Custom House. Supply of coal	A. S. Matthews	" 15, 1906	33 75
Farnham, Post Office. Supply of coal	J. A. Séguin	" 29, 1906	67 50
Fraserville, Post Office. Supply of coal	N. Dion	" 15, 1906	270 00
" Public Building. Repairs to	Alfred Fortier	Oct. 9, 1906	1,725 00
Grosse Isle, Quarantine Station. Building for disinfection	A. Dugal	Nov. 20, 1906	4,689 00
Granby, Post Office. Supply of coal	P. Phoenix	Sept. 17, 1906	227 50
Hochelaga, Post Office. Supply of coal	The T. F. Moore Co	" 4, 1906	121 80
Hull, Post Office. Supply of coal	The C. C. Ray Co., Ltd	" 11, 1906	217 00
Iberville, Construction of a Post Office Building	A. G. Marshall	July 26, 1906	8,150 00
" Post Office. Heating apparatus	"	Feb. 4, 1907	520 00
Joliette, Post Office. Supply of coal	M. H. Leprohon	Sept. 15, 1906	206 59
Lachine, Post Office. Supply of coal	Jos. Allard	" 17, 1906	104 10
" Post Office. Electric wiring	J. O. Desforges	Nov. 15, 1906	150 00
Laprairie, Post Office. Supply of coal	H. Brossard	Sept. 15, 1906	155 00
L'Assomption, Post Office. Supply of coal	Louis Desmarais	" 17, 1906	136 00
Lévis, Post Office. Heating apparatus	Jos. Couture	July 10, 1906	2,178 50
" Post Office. Tower clock	Geo. Guénet	Nov. 20, 1906	1,500 00
" Post Office. Supply of water	City of Lévis	Jan. 11, 1907	per an 250 00
Longueuil, Post Office. Supply of coal	Bruno Normandin	Sept. 14, 1906	160 00
" Post Office. Retaining wall to	Wm. Baker	Oct. 24, 1906	950 00
Montmagny, Public Building. Electric wiring	Chs. Vézina	" 19, 1906	300 00
" Public Building. Heating apparatus	Proulx & Mathurin	Feb. 27, 1907	750 00
Montreal, Postal Station 'B.' Pile work for foundations	Jos. Bourque & Co	July 18, 1906	p. l. ft. 0 43
" Custom House. Lower stone cornice covered with copper	J. B. Pauzé & Co	Sept. 17, 1906	1,050 00
" Post Office. Alterations, &c., to Money Order	" "	Oct. 5, 1906	2,310 00
" Post Office. Supply of three revolving doors	Can. Revolving Door Co	Nov. 28, 1906	1,950 00
" Post Office. Heating apparatus	Jos. Thibault	Feb. 15, 1907	365 00
" Custom House. Supply of coal	The T. F. Moore Co	Sept. 4, 1906	688 93
" Examining Warehouse. Supply of coal	" "	" 4, 1906	1,199 57
" Post Office. Supply of coal	" "	" 4, 1906	864 92
" Postal Station 'B.' Supply of coal	" "	" 4, 1906	114 54
" Revenue Building. Supply of coal	" "	" 4, 1906	263 12
Nicolet, Post Office. Heating apparatus	Geo. Morrissette	Feb. 28, 1907	980 00
Nominingue, Immigration Building. Construction of	Z. Gauthier	Oct. 19, 1906	3,400 00
Quebec, Construction of a freight shed for immigration	The C. P. Ry. Co	Aug. 4, 1906	13,500 00
" Trachoma Hospital. Wiring	P. C. Lacasse	Oct. 10, 1906	1,737 60
" Detention Hospital. Heating apparatus	Martel & Langelier	Jan. 12, 1907	3,000 00
" Examining Warehouse. Additional fittings	Chs. Vézina	Jan. 3, 1907	1,823 00
" Detention Hospital. Supply of coal	M. Madden	Sept. 20, 1906	299 29
" Post Office. Supply of coal	"	" 20, 1906	49 25
" Gov. Gen'l. Quarters. Supply of coal	"	" 20, 1906	504 73
" Cullers' Office. Supply of coal	Jos. Gingras	" 21, 1906	174 67
" Custom House. Supply of coal	"	" 21, 1906	602 33
" Examining Warehouse. Supply of coal	"	" 21, 1906	637 84
" Immigration Office. Supply of coal	"	" 21, 1906	321 47
" Post Office. Supply of coal	"	" 21, 1906	641 79
" St. Roch, Post Office. Supply of coal	"	" 21, 1906	41 10
" Weights and Measures Offices. Supply of coal	"	" 21, 1906	69 87

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.	Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS—*Continued.*			$ cts.
Quebec—Concluded.			
Richmond, Post Office. Supply of coal	S. E. Desmarais & Co	Oct. 15, 1906	248 60
Rimouski, Post Office. Supply of coal	H. G. Lepage	Sept. 26, 1906	181 98
" Public Building. Electric wiring	A. A. Portugais	Aug. 26, 1906	573 00
St. Henri, Post Office. Supply of coal	The T. F. Moore Co	Sept. 4, 1906	123 94
St. Hyacinthe, Inland Revenue. Supply of coal	C. Rouleau & Fils	" 13, 1906	142 92
St. Hyacinthe, Public Building. Wiring	La Cie. du Gas, Electricité Pouvoirs de St. Hyacinthe	Aug. 24, 1906	845 42
" Armoury. Fittings	L. P. Morin & Fils	Mar. 21, 1907	350 00
St. Jérome, Post Office. Supply of coal	S. G. Laviolette	Oct. 2, 1906	252 15
St. Johns, Post Office. Supply of coal	D. Godin	Sept. 17, 1906	117 48
" Post Office. Building, construction of	J. J. Collins	Dec. 14, 1906	28,000 00
St. Louis du Mile End, Post Office. Supply of coal	The T. F. Moore Co	Sept. 4, 1906	199 32
Sherbrooke, Post Office. Supply of coal	Codere, Fils & Cie	Aug. 7, 1906	342 28
Sorel, Post Office. Supply of coal	Leclaire & Fils	Sept. 18, 1906	342 00
Terrebonne, Post Office. Supply of coal	J. O. J. Duguay	" 15, 1906	157 32
Thetford Mines, Post Office. Supply of coal	Jos. Demers	" 15, 1906	244 63
Three Rivers, Post Office. Supply of coal	Geo. Leprohon	" 19, 1906	297 23
" Custom House. Supply of coal	Geo. Leprohon	" 19, 1906	490 77
" Drill Hall. Heating apparatus	Martel & Langelier	July 25, 1906	1,425 00
" Drill Hall. Electric wiring	J. T. Désilets	Aug. 30, 1906	2,069 00
" Drill Hall. Mastic floor	Jos. Bourque	Sept. 19, 1906	1,100 00
Valleyfield, Post Office. Supply of coal	Besner & Chasle	" 13, 1906	374 34
Victoriaville, Post Office. Supply of coal	Octave Gaudet	" 14, 1906	108 75
Ontario.			
Almonte, Post Office. Supply of coal	Wm. McArthur	Sept. 14, 1906	188 50
Amherstburg, Post Office. Supply of coal	Falls Bros.	" 15, 1906	169 00
Arnprior, Post Office. Supply of coal	R. S. Drysdale	" 14, 1906	239 82
" Post Office. Tower clock	Goodwin & White	Jan. 12, 1907	1,868 00
Barrie, Post Office. Supply of coal	Mickle, Dyment & Son	Sept. 14, 1906	232 75
Belleville, Post Office. Supply of coal	Downy Coal Company	" 14, 1906	405 90
Berlin, Post Office. Supply of coal	Boehmer & Company	" 19, 1906	269 67
Bowmanville, Post Office. Supply of coal	McClellan & Co	" 19, 1906	141 50
Brampton, Post Office. Supply of coal	Peaker & Son	" 18, 1906	188 70
Brantford, Post Office. Supply of coal	Wilson Coal Co	" 15, 1906	433 82
" Post Office. Electric wiring	Lyons Electric Co	" 14, 1906	468 00
Bridgeburg, Post Office. Supply of coal	Isaac White	" 22, 1906	180 00
Brockville, Post Office. Supply of coal	The Central Canada Coal Co	" 14, 1906	357 75
" Post Office. Repairs to roof	J. E. Deegan & Co	July 23, 1906	856 00
Burford, Armoury. Fittings	Nagle & Mills	Oct. 15, 1906	952 00
Carleton Place. Post Office. Supply of coal	Taylor Bros. & Co	Sept. 13, 1906	123 50
Cayuga, Post Office. Supply of coal	A. J. Grant	" 29, 1906	122 54
Chatham, Post Office. Supply of coal	A. R. Crowe	" 14, 1906	228 21
Clinton, Post Office. Supply of coal	James Hamilton	" 25, 1906	210 47
Cobourg Post Office. Supply of coal	Estate of John Duncan	" 14, 1906	219 60
" Armoury. Bowling alleys	Ketchum & Co	" 12, 1906	1,050 00
Cornwall, Post Office. Supply of coal	W. D. Morris	" 19, 1906	290 00
Deseronto, Post Office. Supply of coal	The Rathbun Company	Oct. 4, 1906	271 55
Dundas, Post Office. Supply of coal	Chs. Sturrock	Sept. 19, 1906	40 00
Fort William, Post Office. Supply of coal	Jos. Murphy	" 19, 1906	400 00
Galt, Post Office. Supply of coal	Scott & Hogg	" 14, 1906	241 25
" Post Office. Plumbing works	Scott & Bennett	" 14, 1906	1,611 00
Gananoque, Post Office and Custom House. Supply of coal	Thomas Roach	Oct. 15, 1906	225 00
Goderich, Post Office. Supply of coal	Robert Elliott	Sept. 17, 1906	235 38
Guelph, Post Office. Supply of coal	Kloepfer & Co	" 15, 1906	426 20
Hamilton. Post Office. Supply of coal	R. E. Clisdell	" 15, 1906	494 38
" Weights and Measures and Gas Inspection Office. Supply of coal	R. E. Clisdell	" 15, 1906	494 38
" New Drill Hall. Construction of	Geo. F. Webb	July 31, 1906	219,789 00
" Post Office. Alterations, &c. Fittings	W. J. Reid	Dec. 4, 1906	10,638 00
Ingersoll, Post Office. Supply of coal	Wm. Ross	Sept. 28, 1906	207 80
Kingston, Post Office. Supply of coal	P. Walsh	" 14, 1906	399 00
" Custom House. Supply of coal	P. Walsh	" 14, 1906	539 15
" R. M. College. Drain for stables	Wm. R. Clugston	" 5, 1906	1,398 00
" Artillery Barracks. Heating apparatus	McKelvey & Birch	Oct. 24, 1906	1,864 00
" Artillery Barracks. Tile drain Artillery Park	H. W. Watts	" 3, 1906	1,273 00
Lindsay, Post Office. Supply of coal	McLennan & Co	Sept. 14, 1906	189 89
London, Custom House. Supply of coal	R. E. Clisdell	" 15, 1906	870 46
" Post Office. Supply of coal	R. E. Clisdell	" 15, 1906	518 45
" Post Office. Fittings	Wm. Tytler	July 3, 1906	8,270 00
" Military Store Building. Wiring	Rogers Elect. Co	Mar. 7, 1907	782 00

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.	Names of Contractors.	Date of Contract.	Amount.
			$ cts.
PUBLIC BUILDINGS—Continued.			
Ontario—Continued.			
Napanee, Post Office. Supply of coal	Chs. Stevens	Oct. 1, 1906	236 25
Niagara Falls, Post Office. Supply of coal	J. E. Hutchings	Sept. 14, 1906	166 15
North Bay, Post Office. Building, construction of	W. J. McGillivray and P. Labelle	July 30, 1906	33 879 00
" Post Office. Electric wiring	Burrowes & Parmelee	Nov. 20, 1906	889 00
Orangeville, Post Office. Supply of coal	Clarke & Hannah	Sept. 21, 1906	162 50
Orillia, Post Office. Supply of coal	The Tait Carss Lumber Co.	Oct. 1, 1906	213 90
Ottawa, Experimental Farm. Supply of coal	The C. C. Ray Co., Ltd.	Sept. 11, 1906	887 61
" Experimental Farm. Supply of coal	John Heney & Son	" 12, 1906	198 55
" Post Office. Metallic fittings. Railway mail service	The Ottawa Speciality M'fg Co.	July 3, 1906	2,200 00
" Post Office. Money Order Exchange. Fittings	L. W. Hutchison	" 5, 1906	1,369 30
" Post Office. International Money Order Exchange. Furniture and fittings	L. W. Hutchison	" 25, 1906	2,070 00
" Post Office. Interior fittings	L. W. Hutchison	Aug. 7, 1906	2,950 00
" Post Office. Accountants' office. Metallic fittings	Office Speciality M'f'g Co.	" 11, 1906	10,021 90
" Ry's and Canals Dept. Metallic fittings	L. W. Hutchison	" 14, 1906	16,339 90
" Post Office. Postal Note Branch. Metallic fittings	The Eclipse M'f'g Co., Ltd	Sept. 17, 1906	2,850 00
" House of Commons. Ventilation system	Canadian Buffalo Forge Co. Ltd.	" 26, 1906	4,800 00
" Post Office. Marble and tile for lobby	A. K. Mills & Son	" 4, 1906	2,575 00
" Printing Bureau. Hard floor	Doran & Devlin	Oct. 6, 1906	2,200 00
" Supreme Court Library. Additions &c. to	Doran & Devlin	Sept. 17, 1906	11,995 00
" Archives Building. Passenger elevator	Fensom Otis Elevator Co., Ltd.	Nov. 12, 1906	4,000 00
" Militia Department. Metallic fittings	The Office Speciality M'f'g Co., Ltd.	" 3, 1906	2,595 00
" Interior Dept. Mines Branch. Steel fittings	The Eclipse M'f'g Co., Ltd	" 22, 1906	585 50
" Observatory. Metallic steel cabinet for photograph room	The Eclipse Mfg. Co., Ltd.	" 22, 1906	465 00
" Interior Dept. Steel case for records	The Eclipse Mfg. Co., Ltd	" 22, 1906	477 50
" Interior Dept. Steel fittings for Mines Br.	The Eclipse Mfg. Co., Ltd	" 22, 1906	606 50
" Railways and Canals Dept. Steel fittings	Office Speciality Mfg. Co., Ltd.	Dec. 8, 1906	21,970 00
" Parliament Buildings. Extension	W. H. McGillivray & P. Labelle	Jan. 9, 1907	237.433 00
" Post Office Dept. Postal note branch. Steel fittings	Office Spec. Mfg. Co., Ltd.	" 11, 1907	10.517 00
" National Art Gallery. Lighting	Ahearn & Soper, Ltd.	" 28, 1907	742 00
" Royal Mint. Wiring	Ahearn & Soper, Ltd.	Feb. 15, 1907	4,840 00
" Royal Mint. Heating apparatus	Sullivan & Langdon	" 12, 1907	4,789 00
" Public Building. Electric battery for cement laboratory	The Can. Gen. Elec. Co.	" 25, 1907	826 50
" Senate. Installation of 240 Nernst lamps	Ahearn & Soper, Ltd.	Jan. 16, 1907	4,750 00
Paris, Post Office. Supply of coal	Geo. E. Taylor	Sept. 15, 1906	129 95
Pembroke, Post Office. Supply of coal	W. D. Morris	" 19, 1906	230 75
Peterborough, Post Office and Custom House. Supply of coal	J. E. A. Fitzgerald	" 21, 1906	28 51
" Post Office and Custom House. Supply of coal	The Peterborough Fuel & Cartage Co.	" 27, 1906	206 80
" Post Office. Plumbing work	D. Belleghem	July 25, 1906	1,035 50
" Drill Hall. Construction of.	Geo. A. Proctor	Feb. 28, 1907	125,190 54
Picton, Post Office. Supply of coal	Haddon & Ostrander	Sept. 15, 1906	222 75
Port Arthur, Post Office. Supply of coal	Louis Walsh Coal Co	Oct. 2, 1906	200 00
Port Arthur, Public Building. Alterations	M. G. McKinnon	" 20, 1906	930 00
Port Hope, Post Office. Supply of coal	Brown & Co	Sept. 17, 1906	308 00
Prescott, Post Office and Custom House. Supply of coal	James Buckley	" 13, 1906	250 70
Rat Portage, Post Office. Supply of coal	Windatt & Co	Oct. 19, 1906	452 39
St. Catharines, Post Office. Supply of coal	H. M. Rogers	Sept. 14, 1906	261 20
St. Marys, construction of a Post Office Building	R. Cameron	" 29, 1906	22,500 00
St. Thomas, Post Office. Supply of coal	F. M. Griffin	Sept. 13, 1906	264 00
Sandwich, Public Building. Fittings	Judson McLean	Oct. 30, 1906	1,550 00
Sarnia, Post Office, Fittings	Geo. A. Proctor	Sept. 21, 1906	1,169 00
" Post Office. Supply of coal	Clark Coal Co	" 17, 1906	301 50
Sault Ste. Marie, Post Office, Supply of coal	B. Cohen	" 18, 1906	
Smith Falls, Post Office. Supply of coal	H. A. Crate	" 14, 1906	155 25
Stratford, Post Office. Supply of coal	Andrew Johnston & Son	Oct. 3, 1906	302 30
" Post Office. Addition and alteration	D. Easson	Jan. 11, 1907	350 00
Strathroy, Post Office. Supply of coal	Alex. Reid	Sept. 14, 1906	174 22
" Post Office. Fittings	Geo. McBeth	Mar. 4, 1907	420 00

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.	Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS—*Continued.*			$ cts.
Ontario—Continued.			
Toronto, Post Office. Supply of coal	R. E. Clisdell	Sept. 15, 1906	113 82
" Custom House. Supply of coal	The Elias Rogers Co	" 19, 1906	321 42
" Examining Warehouse. Supply of coal	"	" 19, 1906	445 20
" Revenue Office. Supply of coal	"	" 19, 1906	37 99
" Custom House. Supply of coal	The Conger Coal Co	" 19, 1906	584 58
" Examining Warehouse. Supply of coal	"	" 19, 1906	812 03
" Post Office. Supply of coal	"	" 19, 1906	1,722 69
" Revenue Office. Supply of coal	"	" 19, 1906	223 83
" Post Office. Electric wiring	Bennett & Wright	July 24, 1906	2,396 00
" Post Office. Lathing and plastering	Hodge & Son	" 31, 1906	3,540 00
" General Post Office. Painting and glazing	F. C. Davis	" 31, 1906	1,042 00
" Custom House. Marble and tile works, &c	Hoidge Marble Co	" 20, 1906	7,150 00
" General Post Office. Heating apparatus	Bennett & Wright	Aug. 8, 1906	2,200 00
" Post Office. Carpentry work	Wm. Munro & Son	" 31, 1906	5,360 00
" Postal station 'F.' Heating apparatus	Bennett & Wright	Sept. 26, 1906	1,570 00
" Postal station 'F.' Tile floor and fittings	The Chs. Rogers & Son Co., Ltd	Oct. 5, 1906	4,850 00
" General Post Office. Concrete floor	The Alfred Gardner & Co	" 19, 1906	900 00
" Post Office. Fittings, &c	Chs. Rogers & Sons Co	Feb. 22, 1907	3,000 00
Trenton, Post Office. Supply of coal	Chs. Crowe	Sept. 13, 1906	185 50
Walkerton, Post Office. Supply of coal	S. W. Vogan	Sept. 28, 1906	208 73
Windsor, Post Office. Supply of coal	F. X. Scully	" 13, 1906	468 15
Wingham, Post Office. Fittings	S. L. Kyle	July 26, 1906	2,410 00
" Post Office. Granolithic sidewalks	Forest City Paving Co	Aug. 1, 1906	1,950 00
" Post Office. Electric wiring	W. H. Green	Sept. 22, 1906	480 00
Woodstock, Post Office. Supply of coal	The McIntosh Coal Co	" 12, 1906	270 10
" Armoury sidewalks	Wm. Fisher	July 18, 1906	Sch. of rates.
Manitoba.			
Brandon, Post Office. Supply of coal	Robert Purdon	Sept. 17, 1906	728 00
" Experimental Farm. Supply of coal	"	" 17, 1906	75 54
" Post Office. Alterations to interior fittings	P. McGregor	Oct. 6, 1906	800 00
" Experimental Farm. Supply of coal	The Can. Coal and Com. Co.	Sept. 17, 1906	.....
" Post Office. Supply of coal	" "	" 17, 1906	.....
" Immigration Building. Supply of coal	" "	" 17, 1906	.....
St. Boniface, Post Office Building. Construction of	J. McDiarmid Co	Mar. 4, 1907	20,255 00
Winnipeg, Post Office. Supply of coal	D. E. Adams	Sept. 17, 1906	2,310 55
" Immigration Hall. Supply of coal	Western Coal Co	" 17, 1906	587 82
" New Immigration Building. Supply of coal	"	" 17, 1906	1,186 11
" Hospital. Supply of coal	"	" 17, 1906	51 40
" Custom House. Supply of coal	"	" 17, 1906	88 55
" Immig. Office and Shed. Supply of coal	"	" 17, 1906	.....
" Indian Office and Crown Timber Office. Supply of coal	"	" 17, 1906	.....
" Examining Warehouse. Supply of coal	"	" 17, 1906	.....
" Fort Osborne. Forge Building	J. McDiarmid & Co	Oct. 9, 1906	2,600 00
" New Immig. Building. Electric elevator	Wm. Malloch & Co	Aug. 1, 1906	3,440 00
Alberta.			
Calgary, Immigration Shed. Supply of coal	C. S. Lott	Sept. 18, 1906	58 40
" Post Office. Supply of coal	"	" 18, 1906	484 18
" Post Office. Heating apparatus	Alberta Bldg. Co., Ltd.	" 11, 1906	4,600 00
" Post Office. Lighting	North-west Electric Co	Oct. 2, 1906	3,200 00
Edmonton, Dominion Lands Office. Supply of coal	Milner & Co	Sept. 24, 1906	122 21
" Immigration Building. Supply of coal	The Edmonton Coal Co, Ltd	" 21, 1906	154 60
" Immigration Building. Wiring	North-west Elec. Co., Ltd.	Jan. 11, 1907	335 00
" Immig. Building. Heating apparatus	Standard Plumbing and Heating Co., Ltd	Feb. 19, 1907	1,500 00
" Post Office Building. Construction of	May Sharp Construction Co., Ltd	Jan. 21, 1907	214,552 00
Lethbridge Immigration Building. Supply of coal	C. S. Lott	Sept. 18, 1906	241 87
Saskatchewan.			
Forest Nursery Station. Supply of coal	John Hunter	Sept. 26, 1906	358 78
Indian Head, Experimental Farm. Supply of coal	"	" 26, 1906	285 00
Regina, Post Office. Supply of coal	Whitmore Bros	" 17, 1906	246 70
" Dominion Lands Office. Supply of coal	"	" 17, 1906	580 00
" Public Building. Excavation, &c	Snyder Bros	July 14, 1906	Sch. of rates.
" Post Office. Lean to	T. J. Little	Aug. 11, 1906	941 00

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.	Names of Contractors.	Date of Contract.	Amount.
HARBOURS AND RIVERS.			cts.
Nova Scotia.			
Baddeck. Construction of public wharf	Hugh McDonald	Mar. 2, 1907	10,690 00
Charlo's Cove. Construction of a breakwater	"	Sept. 28, 1906	12,875 00
Culloden. Construction of a breakwater	W. H. Anderson & Jas. Parks	" 26, 1906	5,850 00
Jersey Cove. Construction of a wharf and approach.	Hugh McDonald	Oct. 31, 1906	4,620 00
Middle Country Harbour. Construction of a wharf	Jas. W. Taylor	Mar. 1, 1907	2,200 00
Oak Point. Construction of a public wharf	T. P. Charleson	Oct. 23, 1906	7,200 00
Phinney's Cove. Construction of a public breakwater.	J. E. & H. Bigelow	Feb. 27, 1907	5,700 00
Poirierville. Construction of a public wharf	T. D. Morrison	Sept. 19, 1906	7,575 00
Prince Edward Island.			
Point Prim Island. Construction of a wharf	K. Coffin & J. Quinn	Mar. 4, 1907	4,160 00
Souris. Repairs to breakwater	F. S. MacDonald	Nov. 21, 1906	3,295 00
New Brunswick.			
Dalhousie. Block at the western end of wharf	J. B. McManus, Ltd	July 17, 1906	6,230 00
Negro Point. Supply of 1,000 cubic yards of granite for breakwater	J. E. Kane	Oct. 29, 1906	per c. y. 1 65
Sand Point (Rodney Slip). Dredging	G. S. Mayes	Sept. 21, 1906	Sch. of rates.
Quebec.			
Batiscan River. Dredging	H. W. Prendergast	Aug. 11, 1906	" " ..
Beauharnois. Dredging	L. Cohen & Son	Oct. 31, 1906	" " ..
Berthier Channel. Dredging	"	July 17, 1906	" " ..
Blanche Shoals. Dredging	The T. F. Moore Co	" 3, 1906	" " ..
Cape Cove. Construction of a pier	John Burns	Aug. 1, 1906	13,300 00
Chateauguay Basin. Dredging	L. Cohen & Son	Oct. 31, 1906	Sch. of rates.
Coleraine. Construction of a landing pier	Pat. Kennedy	Feb. 18, 1907	4,800 00
Como Wharf. Dredging	L. Cohen & Son	July 11, 1906	Sch. of rates.
Doucet's Landing. Dredging	R. Macdonald	" 19, 1906	" " ..
" Construction of a landing pier	N. Bourgeois	Feb. 8, 1907	4,911 75
Godefroy River. Dredging	Ant. St. Pierre	Sept. 27, 1906	Sch. of rates.
Grand Mechins. Construction of a wharf	J. J. Collins	Oct. 3, 1906	26,900 00
Grosse Isle, Quarantine Station. Extension to wharf.	Nap. Trudel	Feb. 6, 1907	22,467 00
Isle aux Foins. Dredging	L. Cohen & Son	July 11, 1906	Sch. of rates.
L'Assomption River. Dredging	The General Construct. Co.	Aug. 18, 1906	" " ..
Lambton. Construction of a landing pier	John Lowrey	Feb. 15, 1907	7,750 00
Les Escoumains. Extension to wharf	T. P. Charleson	Nov. 23, 1906	12,445 00
Maskinongé River. Dredging	The W. J. Poupore Co., Ltd.	July 14, 1906	Sch. of rates.
Montmagny. Construction of a wharf	Théophile Bernier	Oct. 29, 1906	9,640 00
North River. Dredging	The General Construct. Co.	July 16, 1906	Sch. of rates.
Oka. Dredging	L. Cohen & Son	" 16, 1906	" " ..
Rigaud Channel. Dredging	"	" 11, 1906	" " ..
" Main Channel. Dredging	"	" 11, 1906	" " ..
River St. Francis. Dredging	The Canada Improvemt. Co	" 17, 1906	" " ..
River du Loup (en haut). Dredging	The W. J. Poupore, Co., Ltd	" 14, 1906	" " ..
River St. Louis (mouth). Dredging	The General Construct. Co.	" 16, 1906	" " ..
River St. Maurice. Dredging	The W. J. Poupore Co., Ltd.	" 14, 1906	" " ..
St. Francois, I.O. Approach to isolated crib	J. A. Lemay	Aug. 11, 1906	24,000 00
St. Jean, I.O. Extension to wharf	Nap. Trudel	" 15, 1906	12,280 00
St. Placide. Dredging	L. Cohen & Son	July 11, 1906	Sch. of rates.
St. Valier. Landing pier	Lemay & Poliquin	Feb. 6, 1907	10,995 00
Seven Islands. Construction of wharf and approach.	North Shore Power, Ry. & Nav. Co., Ltd	Jan. 4, 1907	29,990 00
Yamaska River. Dredging	The W. J. Poupore Co., Ltd.	July 14, 1906	Sch. of rates.
Ontario.			
Owen Sound. Pile concrete revetment wall	Green & Mackinnon	Nov. 21, 1906	11,997 00
Port Arthur. Breakwater	M. J. Hogan	" 5, 1906	363,000 00
" Dredging in the harbour	R. Weddell	Aug. 11, 1906	Sch. of rates.
" Temporary pile breakwater	Canadian Northern Coal & Ore Dock Co., Ltd	Sept. 3, 1906	13,000 00
Manitoba.			
St. Andrew's Rapids. Masonry of lock and dam, &c.	H. Quinlan & A. W. Robertson	Oct. 11, 1906	Sch. of rates.
" " Supply of 10,000 barrels of cement	The Owen Sound Portland Cement Co., Ltd	Mar. 23, 1907	Sch. of rates.

No. 1.—Contracts let by the Department of Public Works, &c.—*Concluded.*

Works.	Names of Contractors.	Date of Contract.	Amount.
Harbours and Rivers—*Concluded.*			$ cts.
British Columbia.			
New Westminster, Dredge *King Edward.* Supply of coal	Gilley Bros.	Aug. 7, 1906.	Per ton, 5 00
New Westminster, Snag Boat *Samson.* Supply of coal	"	" 7, 1906.	" 5 00
Vessels, Dredges and Plant.			
Construction of three steel hopper barges	Collingwood Shipbuilding Co., Ltd.	July 3, 1906.	70,500 00
Construction of a steel tug	"	" 3, 1906.	53,500 00
Machinery for Dredge No. 6	A. Gerard	Dec. 14, 1906.	3,490 00
Swing engine for Dredge No. 6	Victoria Foundry Co.	" 14, 1906.	1,375 00
Engine machinery for Dredge *St. Louis*	G. Law.	" 14, 1906.	2,750 00
Machinery for Snag Boat for Skeena River, B.C.	The Schaake Machine Wks., Ltd.	Jan. 10, 1907.	12,000 00
New boiler for Tug *Monitor*	A. Thomas & Son.	Feb. 20, 1907.	3,659 00
C. G. S. Tyrian. Alterations in engine-room	Ferguson & Cox.	" 26, 1907.	1,200 00
" Electric lighting	Hann & Walsh.	Mar. 2, 1907.	4,500 00

No, 2.—STATEMENT of properties purchased or sold by the Department of Public Works during Nine months ended March 31, 1907.

Date of Conveyance.	Vendors.	Purchasers.	Description of Property.	For what Purpose.	Area.	Price.
1906.						$ cts.
July 3	D. Johnston, *et ux*	His Majesty	Land at Towney River, N.S.	Boat Harbour	2 75/100 acres	450 00
" 3	A. W. Archibald, *et ux.*	"	Land at Towney River, N.S.	"	0 06/100 acres	24 00
" 5	Provincial Government	Federal Government	Beach lot at St. Valier, Que.	Wharf		200 00
" 6	R. & O. Nav. Co.	His Majesty	Land and wharf, Lavaltrie, P.Q.	"	11,530 ft.	800 00
" 6	Wm. Beveridge	"	Lots 5-6, Block 11., Ladysmith, B.C. (site)	Public Building		1,500 00
" 11	W. B. Ross	"	Land at Oak Point, N.B.	Approach to wharf	1/8 acre	100 00
" 12	C. C. King	"	Lot corner of St. John and Water Sts., Shelburne	Site Pub. Building		1,500 00
" 23	La Corporation du College Ste. Marie de Montreal	"	Land—Fort William, Ont.	Kaministiquia River Improvements	2 93/100 acres	
" 24	Jas. Cleukskill	"	Westerly 90 ft. lots 1, 2, 3 & 4, block 148, Saskatoon, Sask.	Site for Pub. Building		9,000 00
Aug. 3	Sabra Harvey, *et al*	"	Land at New Port Landing, N.S.	For wharf		270 00
" 9	Municipality of E. Templeton	"	Lot 12 F. 1st Range, East Templeton	"	1/4 acre	1 00
" 14	T. S. Drennon	"	Lot 17, Block 1, Alameda, N.W.T.	Site, Pub. Building		300 00
" 17	Can. Pac, Ry. Co.	"	Land, Town of Fort William, Ont.	Kaministiquia River Improvements	1 25/100 acres	1 00
" 25	Wm. A. Patterson	"	Land at Tatagamouche, N.S.	Right of way to wharf	55/100 acre	500 00
" 31	J. T. Myers, *et ux*	"	Lot at Jeddore, Oyster Pond, N.S.	Wharf	1,750 sq. ft.	15 00
Sept. 1	Mary Boiron, *et vir*	"	Land at Charlo's Cove, N.S.	Breakwater	1/10 acre	25 00
" 18	His Majesty	J. A. Haviland	All port lot No. 36 Chatham, N.B.	Old building property		610 00
" 22	Rev. C. Ph. Côté	His Majesty	Strip of land, L'Anse du Cap, P.Q.	Right of way to wharf	22 x 178 ft	Free grant.
Oct. 6	Margaret Haine	"	Land—Middle Country Harbour, N.S.	For wharf		75 00
" 9	Dame Alp. Perreault, *et al*	"	St. Jean des Chaillons—Land at. Quebec	Approach to wharf	9,620 sq. ft.	150 00
" 15	Hercule Morin	"	Deschambault, P.Q., part of lot 32	For wharf		300 00
" 19	M. T. Sullivan	"	Glace Bay, N.S., land at.	Site—Pub. Building		4,999 00
" 19	L. Morel	"	Land and wharf at Grand Riv. Beaupré, Que.	Wharf	26,969 ft.	1,200 00
" 20	J. A. Mitchell	"	Victoria, Alta. River lot No. 6, T. 58.	Site for Pub Building	1 acre	300 00
" 23	P. & J. A. Dixon	"	North Head, Grand Manan, N.B. Land and wharf.	Gov't. purposes		2,000 00
" 30	Corporation of Three Rivers	"	Three Rivers, Que. Lots 1896, 7, 8, 9, and 1900, &c.	For Drill Hall		Free grant.
Nov. 2	Urbain Denis	"	Paspébiac, Que. Beach lot, Township of Cox	For wharf	6,600 ft.	125 00
Dec. 24	Frs. Davidson, *et ux*	"	Bridgewater. N.S. Land at.	Site Pub. Building	16, 200 sq. ft.	5,500 00
" 31	F. B. MacLeod	"	Amherstburg, Ont., lots 6, 7	Improving Detroit Riv	33/100 acre	100 00
1907.						
Jan. 2	W. P. Foley, *et ux*	"	Caraquet, N.B., land at.	Right of way to wharf	3/10 acre	550 00
" 10	Thos. Irwin	"	Cumberland, B.C., lot 12, Block 11.	Site for Pub. Building		700 00
" 15	E. Ménard, *et ux*	"	L'Anse à Giles, Que., strip of land	Right of way to wharf	30 per .232 ft. in sup	50 00
" 19	The Bras D'Or Lime Co.	"	Marble Mountain, N.S., land	Right of way to wharf	15 x 504 ft.	200 00
" 28	R. McDonald, *et ux*	"	Marble Mountain, N.S., land.	For wharf	14,540 ft. in sup.	600 00
Feb. 11	Margaret Menzies	"	Amherstburg, Ont., water lot.	Improving Detroit Riv	25/100 acre	100 00
" 16	Wm. Price, *et al*	"	L'Anse à Giles, Que., land and wharf	Wharf	2 acres, 3 roods, 8 perches, 34 ft	1.150 00
" 23	C. C. King, *et ux*	"	Shelburne, N.S., land.	Site for Pub. Building	3,723 sq. ft.	1,500 00
March 11	Ann Martell, *et al*	"	Main à Dieu, N.S., lot of land.	Site for Breakwater	3,122 sq. ft.	150 00
" 19	L. L. Dionne	"	Péribonka, Que., land at.	Immg. Building		200 00

No. 3.—STATEMENT of Properties Leased to and by the Department of Public Works during the Nine months ended March 31, 1907.

Date of Lease.	Lessors.	Lessees.	Property Leased.	For what purpose.	Duration of Lease.	Annual Rental.
1906.						$ ets.
July 3	A. E. Brown	His Majesty	Montreal, stonehouse, St. Antoine street	Immg. purposes	1year	2,000 00 p annum.
Aug. 8	J. G. Nicholson, *et al*	"	Battleford, Sask., lease of building	"	9 months	20 00 p. month.
" 30	His Majesty	L. F. M. Globensky	Ottawa, Sussex st., House No. 374	Private enterprise	8 "	18 00per. mo.
" 30	"	J. G. Kearns	Ottawa, Sussex st., House No. 376	"	8 months	17 00 "
" 30	"	Mathilda Valiquette	Ottawa, Sussex st., House No. 384	"	8 "	18 00 "
" 30	"	L. J. A. Dubé	Ottawa, Sussex st., House No. 386	"	8 "	16 00 "
" 30	"	J. C. Pepin	Ottawa, Sussex st., House 390	"	7 "	13 00 "
" 30	"	Alf. Dostaler	Ottawa, Sussex st., House No. 392	"	8 "	13 00 "
" 30	"	Geo. Marion	Ottawa, Sussex st., House Messnage No. 426½	"	8 "	10 00 "
" 30	"	J. R. Shaw	Ottawa, Sussex st., House Messnage No. 424	"	8 "	15 00 "
" 30	"	J. P. & F. W. Esmonde	Ottawa, St. Patriek st., No. 106	"	8 "	8 33 "
" 30	"	J. G. Grant & Co	Ottawa, Sussex st., Messnage No. 418	"	8 "	10 00 "
" 30	"	S. Lépine	Ottawa, Sussex st., Richelieu Hotel	"	8 "	50 00 "
Sept. 13	Jas. W. Woods	His Majesty	Ottawa, south side Slater st	Gov't. Offices	5 years	27,330 06 p. annum
Oct. 21	The Canadian Northern Ry. Co	"	Edmonton, Alta. Land at	Gov't. purposes	21 "	1 00 "
Nov. 5	His Majesty	Rev. C. Croucher	Yale, B.C. Old Government grounds	Private enterprise	10 "	5 00 "
Dec. 12	Imperial Bank of Canada	His Majesty	Toronto, Ont. Premises Yonge st	For letter carriers	6 months	75 00 per mo.
" 29	A. Driscoll & S. H. Smith	"	Edmonton, Alta. Premises at	Postal purposes	2 years	2,700 00p. annum.
1907.						
Jan. 7	C. E. Thibault	"	Montreal. Lease of premises Amherst st	Postal purposes	3 years	1,000 00p. annum.
Feb. 16	J. N. Tiee	"	Stettler, Alta. Lease of building	Immg. purposes	8 months	200 00w. period.
" 28	M. Jno. MacLeod	"	Moose Jaw, Sask	For Interior Dept	7 years	1,800 00 p. annum.
Mar. 1	J. H. Patterson	"	Ottawa. Mackenzie avenue			230 00 "
" 9	John Gibbs	"	Toronto, Ont. Premises No. 739 Queen st	Postal Station "F"	2 "	500 00
" 9	John Burn	"	Sedgewieh, Alta. Lease of shed	Immg. purposes	7 months	210 00 w. period.
" 22	School Distriet of Virden	"	Virden Man. Lease of building	Immg. purposes	1 year	250 00 p. annum

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, October 1, 1907.

J. A. CHASSE,
Law Clerk.

LIST

OF SOME OF THE

ACTS OF PARLIAMENT

PASSED AT THE SESSION OF 1907

HAVING REFERENCE TO THE

DEPARTMENT OF PUBLIC WORKS OR WORKS UNDER ITS CHARGE

List of some of the Public Acts of the Parliament of Canada, passed at the Second Session of the Tenth Parliament, closed by Prorogation on the thirteenth day of July, 1906, and having reference to the Public Works Department or works under its charge (6 Edward VII.)

Subject.	Full title of the Statute.	Chapter.	Page in Statute Book.
Sums granted to His Majesty for the financial year ending March 31, 1907, and the financial year ending March 31, 1908, and the purposes for which they are granted.	An Act for granting to His Majesty certain sums of money for the financial period of nine months ending March 31, 1907, and the financial year ending March, 1908.	3	41
Advances to Harbour Commissioners of Montreal.	An Act to provide for further advances to the Harbour Commissioners of Montreal.	30	285
Power for Quebec Harbour Commissioners to borrow $800,000.	An Act to increase the borrowing powers of the Quebec Harbour Commissioners.	36	299
Respecting R.S., 1906.....	An Act respecting the Revised Statutes, 1906..	43	329

J. A. CHASSE,
Law Clerk.

Department of Public Works,
Ottawa, November 1, 1906.

NATIONAL ART GALLERY

CURATOR'S REPORT

FOR THE FISCAL YEAR ENDED MARCH 31, 1907

NATIONAL ART GALLERY.

SIR,—I have the honour to report that the following additions, by purchase, were made to the National Art collection during the fiscal year ended March, 31, 1907:—

1. 'Ignatius Sanchez,' by Thos. Gainsborough, R.A.
2. 'Spanish Dance at Granada,' by François Flameng.
3. Portrait of H.I.M. King Edward VII.
4. Portrait of H.I.M. Queen Alexandra.

The net cost of Nos. 1 and 2, was $2,850, and of Nos. 3 and 4, $5,000.

The oil paintings and water colour paintings of the collection have been rearranged and renumbered by Mr. F. A. Brunnelle, R.C.A., who has prepared a catalogue which is being printed for distribution to visitors.

Eight thousand two hundred and twelve visitors registered at the gallery during the nine months.

I have the honour to be, sir,
Your obedient servant,

WALTER R. BILLINGS,
Acting Curator, National Art Gallery.

OTTAWA, August 10, 1907.

NAMES OF THE CHIEF OFFICERS

OF THE

DEPARTMENT OF PUBLIC WORKS

WITH

DATES OF APPOINTMENT, ETC., FROM 1841 TO 1907

NAMES OF THE CHIEF OFFICERS.

The names with the dates of the appointment, &c., of the principal Officials of the Department of Public Works, from 1841 to 1907.

Names.	Capacity or Office.	Date of Appointment. Served. From	To
Under Statute 4-5 Vic. Chap. 38.			
CORPORATION BOARD OF WORKS.			
Killaly, Hon. H. H.	Chairman.		
Daly, Hon. D.			
Harrison, S. B.	Members.	Dec. 29 1841	Oct. 3, 1844
Sullivan, R. B.			
Davidson, J. Esq.			
Begly, Thomas A.	Secretary.	Aug. 17 1841	
Keefer, Samuel	Chief Engineer.	" 17 1841	
Rubidge, F. B.	Architect and Assistant Chief Engineer.	Dec. 15 1841	
NEW BOARD OF WORKS.			
Killaly, Hon. H. H.	Chairman.		
Daly, Hon. D.			
Draper, Hon. W. H.	Members.	Oct. 4 1844	June 8, 1846
Morris, Hon. W.			
Papineau, Hon. D. B.			
Under Statute 9th Vic. Cap. 37 &c.			
Robinson, Hon. W. B.	Chief Commissioner.	June 22 1846	March 10, 1848
Taché, Hon. E. P.	"	March 11 1848	Nov. 26, 1849
Chabot, Hon. J.	"	Dec. 13 1849	March 31, 1850
Merritt, Hon. W. H.	"	April 8 1850	Feb. 11, 1851
Bourret, Hon. J.	"	Feb. 12 1851	Oct. 27, 1851
Young, Hon. John	"	Oct. 28 1851	Sept. 22, 1852
Chabot, Hon. J.	"	Sept. 23 1852	Jan. 26, 1855
Lemieux, Hon. F.	"	Jan. 27 1855	Nov. 25, 1857
Alleyn, Hon. C.	"	Nov. 26 1857	Aug. 1, 1858
Holton, Hon. L. H.	"	August 2 1858	" 6, 1858
Sicotte, Hon. L. V.	"	" 7 1858	Jan. 10, 1859
Rose, Hon. John	"	Jan. 11 1859	June 12, 1861
Cauchon, Hon. Jos.	Commissioner.	June 13 1861	May 23, 1862
Tessier, Hon. U. J.	"	May 24 1862	" 27, 1863
Drummond, Hon. L. T.	"	" 28 1863	July 23, 1863
Laframboise, Hon. M.	"	July 24 1863	March 29, 1864
Chapais, J. C.	"	March 30 1864	June 30, 1867
Casgrain, Hon. Chas. Eus.	Second commissioner.	July 9 1846	Feb. 29, 1848
Cameron, Hon. M.	Assistant Commissioner.	March 11 1848	" 1, 1850
Wettenhall, James Esq.	"	Feb. 2 1850	April 16, 1850
Bourret, Hon. Jos.	"	April 17 1850	Feb. 11, 1851
Killaly, Hon. H. H.	"	Feb. 12 1851	May 6, 1859
Keefer, Samuel	Deputy Commissioner.	May 6 1859	March 7, 1864
Trudeau, Toussaint	"	March 8 1864	May 29, 1868
Begley, Thos. A.	Secretary.	Feb. 10 1841	Oct. 31, 1858
Trudeau, Toussaint	"	Dec. 13 1859	March 7, 1864
Braun Frederick	"	March 8, 1864	July 1, 1867
Page, John	Chief Engineer.	Oct. 31, 1873	Oct. 1, 1879
Under Statute 31 Vic., Chap. 12.			
McDougall, Hon. Wm.	Minister.	July 1, 1867	Dec. 7, 1869
Langevin, C. B., Hon. Hector L.	"	Dec. 8, 1869	Nov. 6, 1873
Mackenzie, Hon. Alexander	"	Nov. 7, 1873	Oct. 16, 1878
Tupper, C.B., K.C.M.G., Sir Charles	"	Oct. 17, 1878	May 19, 1879
Langevin, C.B., K.C.M.G. Sir Hector L.	"	May 20 1879	Aug. 11, 1891

The names with the dates of the appointment, &c., of the principal Officials of the Department of Public Works, from 1841 to 1907.—*Concluded.*

Names.	Capacity or Office.	Date of Appointment. Served. From	To
Smith, Hon. Frank	Acting Minister	Aug. 14, 1891	Jan. 10, 1892
Ouimet, Hon. Joseph Aldéric	Minister	Jan. 11, 1892	April 30, 1896
Desjardins, Hon. Alphonse	"	May 1, 1896	July 12, 1896
Tarte, Hon. J. Israel	"	July 13, 1896	Oct. 21, 1902
Sutherland, Hon. James	"	Nov. 11, 1902	May 3, 1905
Hyman, Hon. Charles S.	"	May 22, 1905	
Trudeau, Toussaint	Deputy Minister	" 29, 1868	Oct. 1, 1879
Baillargé, G. F.	"	Oct. 4, 1879	Dec. 31, 1890
Gobeil, A., I.S.O.	"	Jan. 1, 1891	
Braun, Frederick	Secretary	July 1, 1867	Sept. 30, 1879
Chapleau, S.	"	Oct. 1, 1879	Nov. 4, 1880
Ennis, F. H.	"	Nov. 5, 1880	Jan. 13, 1885
Gobeil, A.	"	Jan. 23, 1885	Dec. 31, 1890
Roy, E. F. E.	"	" 1, 1891	" 31, 1900
Gélinas, Fred.	"	June 8, 1901	
McPherson, D. A.	Assistant Secretary	Jan. 18, 1891	April 11, 1893
Desrochers, Rodolphe Charles	" "	" 8, 1896	
Page, John	Chief Engineer	July 1, 1868	Oct. 1, 1879
Perley, H. F.	"	Nov. 25, 1880	July 10, 1891
Coste, Louis	"	July 26, 1892	March 18, 1899
Lafleur, E. D.	"	Jan. 7, 1905	
Scott, Thos. S.	Chief Architect	May 26, 1871	Oct. 30, 1881
Fuller, Thomas	"	Oct. 31, 1881	June 30, 1897
Ewart, David, I.S.O.	"	Nov. 2, 1897	

NAMES

OF THE

OFFICIALS EMPLOYED ON THE SLIDES AND BOOMS OF CANADA

ON MARCH 31, 1907

WITH

DATES OF APPOINTMENT, SALARIES, ETC.

OFFICIALS EMPLOYED ON THE SLIDES AND BOOMS.

STATEMENT showing the Names, Dates of Appointment, Salaries, &c., of persons employed on the various Slides and Booms on March 31, 1907.

Name.	Date of Birth.	Position.	Where Employed.	Date of Appointment.	Salary.	Remarks.
Collector of Public Works Revenue.					$ cts.	
E. T. Smith	Nov. 26, 1846	Collector, chief clerk	Ottawa	July 1, 1889	1,900 00 a year	Date of first appointment to Crown timber office, Ottawa, June 23, 1864. Clerk in Dept. of Inland Revenue, July 1, 1870, to June 30, 1889. Transferred to civil list, with rank of first class clerk, January 5, 1892. Chief clerk, July 1, 1906.
F. X. Gagné	Sept. 23, 1859	3rd class clerk	"	Aug. 13, 1889	1,100 00 "	
James Steen	June 17, 1830	Boatman	"	July 12, 1889	60 00 a month	Employed during the season of navigation for eight months each year. Date of first appointment, May 26, 1861. Timber counter, Ottawa, for Dept. of Inland Revenue, January 7, 1884, to June 30, 1889.
J. Brassard		"	"	Mar. 1, 1901	60 00 "	Employed during the season of navigation for eight months each year.
Saguenay District.						
G. Bilodeau	Jan. 29, 1841	Boom master	Chicoutimi	May 1, 1906	60 00 "	
Arm. Ouellet	June 15, 1879	" keeper	"	" 1, 1906	40 00 "	
William Dallaire	Oct. 8, 1857	" "	"	Apr. 1, 1907	50 00 "	
Willie Dallaire	Dec. 23, 1882	" "	"	May 1, 1906	40 00 "	
St. Maurice District.						
L. P. Dallaire	June 11, 1866	Paymaster	Three Rivers	" 1, 1898	66 66 "	
Jos. Pagé	July 7, 1845	Boom master	Mouth of St. Maurice	Dec. 10, 1879	75 00 "	
Jos. Dick	Apr. 15, 1848	Asst. boom master	Three Rivers	Apr. 21, 1898	75 00 "	
H. Bourassa	" 15, 1859	" "	Ste. Flore	Dec. 2, 1906	52 00 "	
Moïse Masson	Dec. 29, 1845	Boom master	Grandes Piles	Apr. 19, 1898	75 00 "	
N. Lymburner	July 22, 1855	"	Shawenigan Falls	July 1, 1895	75 00 "	
Napoléon Lapointe	Mar. 15, 1872	"	Shawenigan Bay	Nov. 12, 1906	75 00 "	
Pierre Duchaine	Oct. 8, 1856	"	Grand Mère	May 7, 1907	75 00 "	
Ottawa District.						
G. P. Brophy	Feb. 24, 1846	Superintendent	Ottawa	July 6, 1873	2,700 00 a year	*Ottawa River Works.*—In addition to the above officers, &c., there are employed during the running season, one foreman on slide at $1.50, and one assistant foreman at $1.25 a day; also 25 to 30 labourers at $1 to $1.40 a working day.
J. Kent	Jan. 28, 1864	Accountant*	"	Aug. 1, 1886	1,400 00 "	
J. C. Scott	June 27, 1865	Asst. engineer	"	Apr. 1, 1889	5 00 a day	
S. E. Smith	May 25, 1869	Clerk	"	Nov. 7, 1904	2 50 "	
Wm. Cain	Apr. 22, 1860	Messenger	"	Jan. 1, 1892	1 50 "	

* Appointed accountant, October 4, 1904.

Pierre Saint-Pierre	Mar. 13, 1853	Deputy slide master	Carillon	June 1, 1897	1 40 "	Actively employed about seven months. Oversees repairs in winter.
D. Noonan	June 17, 1840	Boom master	Gatineau	Mar. 21, 1878	500 00 a year	" "
J. Soulière	Nov. 8, 1829	Deputy slide master	Chaudière	—— —, 1858	3 00 a day	" "
P. D. Chêné	May 6, 1843	"	Hull	June 14, 1899	1 75 "	Employed about six months.
W. A. Shirreff	Oct. 27, 1842	"	Chats	Apr. 26, 1898	1 50 "	Oversees repairs in winter.
John Harvey	May 22, 1831	Slide master	Arnprior	July 12, 1882	2 50 "	Actively employed about seven months.
Joseph McCrea	Mar. 26, 1859	Boom master	Springtown	May 15, 1880	25 00 a month	Employed about three months during season of navigation.
Patrick Barry	" 27, 1858	Slide master	High Falls	Mar. 10, 1888	1 50 a day	Employed four months during season of navigation. Oversees repairs in winter.
Duncan McLaren	Jan. 7, 1860	Deputy slide master	Portage du Fort	Sept. 7, 1881	456 25 a year	" "
N. Rochon	Apr. 2, 1879	"	Black River	Mar. 1, 1900	480 00 "	" "
Wm. Selkirk	May 9, 1848	"	Lower Petewawa	Jan. 19, 1900	2 00 a day	" "
J. R. Jennings	Apr. 28, 1843	"	Upper Petewawa	June 2, 1905	2 00 "	
Wm. Thompson	May 3, 1843	"	Mountain	Sept. 2, 1879	1 25 "	" 6 months "
S. Moorhead	" 3, 1851	"	Calumet	Mar. 1, 1901	1 25 "	" 6 to 7 months "
John Mullin	July 27, 1851	"	Coulonge	Apr. 10, 1899	1 50 "	" 4 months "
T. Costello	June 13, 1851	"	Des Jachims	Mar. 1, 1904	300 00 a year	" " "
J. F. McGuire	Dec. 16, 1842	"	Dumoine	May 1, 1897	2 00 a day	Employed three months during season of navigation. Will inspect works when required.
Jas. Carey	July 6, 1850	In charge	Cedar Lake Dam	April 1, 1901	2 00 "	
J. Malbœuf	Nov. 13, 1844	Deputy slide master	Crooked Chute	" 3, 1905	2 00 "	
A. H. Johnson	" 28, 1839	"	Chenaux	—— —, 1865	2 50 "	Paid during season of navigation, seven months.
Newcastle District.						
W. T. Junkin	Nov. 2, 1867	Slide master	Fenelon Falls	Nov. 15, 1896	100 00 a year	Receives $360 a year as lock master from Dept. of Railways and Canals.
J. G. Bates		"	Burleigh Falls	Feb. 6, 1907	100 00 "	" "
Richelieu District.						
C. Choquette	Nov. 25, 1850	Boom master	Beloeil Station	July 26, 1897	100 00 "	
Burlington Channel Swing Bridge.						
Wm. Omand	July 6, 1837	Bridge attendant	Burlington	Sept. 19, 1896	600 00 "	
W. Hopkins	June 4, 1846	Bridge assistant	Burlington	July 1, 1902	1 50 a day	Employed nine months.
H. Lampman	Dec. 14, 1863	"	"	Sept. 8, 1902	1 50 "	"
Jas. Eustice	Feb. 27, 1872	"	"	" 19, 1896	1 50 "	"
Yamaska Lock.						
O. Mineau	July 4, 1844	Lock keeper	Yamaska	" 1 1885	75 00 a month	"
H. Lambert	Aug. 20, 1844	"	"	July 1, 1897	40 00 "	"
Riviere du Lièvre Lock.						
Hugh R. Gorman	Sept. 20, 1842	Lock master	Rivière du Lièvre	Apr. 15, 1897	480 00 a year	
Charles Brazeau	Dec. 23, 1862	Labourer	"	Mar. 3, 1902	35 00 a month	Employed eight months.
Riviere Saint-Louis, Feeder.						
Julien Monpetit	Mar. 4, 1866	Gate keeper	Rivière St. Louis	May 11, 1903	10 00 a month	

JOS. VINCENT.

NAMES

OF

PERSONS EMPLOYED ON THE VARIOUS GRAVING DOCKS

ON MARCH 31, 1907.

WITH

DATES OF APPOINTMENT, SALARIES, ETC.

GRAVING DOCK EMPLOYEES.

STATEMENT showing the names, Dates of Appointment, Salaries, &c., of persons employed on the various Graving Docks, March 31, 1907.

Name.	Position.	Where Employed.	Date of Appointment.	Salary.	Remarks.
Esquimalt Graving Dock, British Columbia.				$ cts.	
J. A. Gould	Dockmaster	Esquimalt	June 30, 1906	133 33 a month	
John Jeffcott	Engineer	"	Jan. 4, 1901	100 00 "	
F. N. Jones	Assistant engineer	"	" 8, 1901	80 00 "	
A. D. Grieves	Carpenter	"	Dec. 1, 1887	80 00 "	
J. A. Maltravers	Labourer	"	July 1, 1906	50 00 "	
J. Stock	"	"	" 1, 1894	50 00 "	
Chas. Jordan	Stoker	"	" 1, 1901	60 00 "	
G. Springer	"	"	Apr. 1, 1903	60 00 "	
J. Young	Night watchman	"	June 1, 1903	50 00 "	
Lévis Graving Dock.					
Alf. Samson	Dockmaster	Lévis	Feb. 15, 1900	1,600 00 a year	
W. Macdougal	Mechanical engineer	"	June 1, 1888	75 00 a month	
T. Després	Asst. mechanical engineer	"	July 21, 1901	60 00 "	
Narcisse Lemelin	Fireman	"	June 1, 1888	40 00 "	
Kingston Graving Dock.					
F. S. Rees	Dockmaster	Kingston	Apr. 1, 1897	1,000 00 a year	
James Gillie	1st engineer	"	Nov. 1, 1905	75 00 a month	
Wm. Geoghegan	Fireman	"	" 1, 1892	45 00 "	
C. Staley	Watchman	"	" 1, 1892	45 00 "	

JOS. VINCENT.

LIST

OF

ENGINEERS, ENGINEMEN, FIREMEN AND CARETAKERS

EMPLOYED IN THE

PUBLIC BUILDINGS THROUGHOUT THE DOMINION ON MARCH 31, 1907

DATES OF APPOINTMENT, SALARIES, ETC.

ENGINEERS AND CARETAKERS' PUBLIC BUILDINGS.

STATEMENT showing the Names, &c., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings on March 31, 1907.

Place.	Building.	Name.	Date of Birth.	Position.	Date of Appointment.	Monthly Salary.	Time Employed each Year.	Yearly Salary.
						$ cts.		$ cts.
Amherst..... N.S.	Post office.....	J. H. Chapman.....	Jan. 3, 1846..	Caretaker	Sept. 1, 1901..	33 33	12 months...	400 00
Antigonish..... "	Public building.....	D. McGillivray.....	Feb. 17, 1847..	"	June 11, 1906..	33 33	12 " ...	400 00
Annapolis..... "	Post office and custom house.	John McKay.....	Oct. 26, 1847..	"	Apr. 1, 1891..	33 33	12 " ...	400 00
Arichat..... "	Public building	Mrs. G. DeRoch.....	June 30, 1868..	"	May 5, 1905..	12 50	12 " ...	150 00
Baddeck..... "	"	D. F. McKenzie.....	May 20, 1848..	"	Jan. 21, 1899..	20 83	12 " ...	250 00
Dartmouth..... "	"	I. C. Henley.....	Dec. 11, 1846..	"	May 22, 1894..	20 83	12 " ...	250 00
Digby..... "	"	F. Dennison.....	Nov. 8, 1841..	"	Mar. 14, 1902..	33 33	12 " ...	400 00
Guysborough..... "	"	W. G. Hadley.....	Nov. 29, 1844..	"	May 2, 1906..	4 16	12 " ...	50 00
Halifax..... "	Dominion building	Richard Power.....	Aug. 15, 1834..	Engineer.....	Oct. 1, 1871..	62 50	12 " ...	750 00
" ..... "	"	J. DeYoung.....	Dec. 8, 1860..	Fireman.....	Nov. 28, 1904..	50 00	12 " ...	600 00
" ..... "	"	J. F. Sullivan.....	Apr. 16, 1866..	Caretaker.....	July 1, 1892..	33 33	12 " ...	400 00
" ..... "	"	J. Delaney.....	May, 1848..	Watchman.....	Jan. 6, 1906..	39 00	8 " ...	468 00
" ..... "	Drill hall.....	John Crowell.....	Feb. 26, 1852..	Engineer.....	Dec. 13, 1901..	50 00	12 " ...	600 00
" ..... "	Armouries.....	R. Morrison.....	Mar. 26, 1857..	Fireman.....	Mar. 4, 1903..	50 00	12 " ...	600 00
" ..... "	Examining warehouse.....	M. O'Neil.....	Dec. 30, 1850..	Caretaker.....	Oct. 1, 1897..	37 50	12 " ...	450 00
" ..... "	Immigrant building.....	John Oxley.....	Apr. 17, 1856..	Fireman.....	Feb. 2, 1897..	55 00	12 " ...	660 00
" ..... "	New custom house.....	J. Barnes.....	Dec. 3, 1857..	Engineer.....	Jan. 28, 1907..	60 00	12 " ...	720 00
" ..... "	" "	G. Seling.....	Apr. 21, 1854..	Fireman.....	Apr. 26, 1907..	50 00	12 " ...	600 00
Kentville..... "	Public building	W. Hiltz.....	" 30, 1864..	Caretaker	Nov. 14, 1900..	33 33	12 " ...	400 00
Liverpool..... "	"	James Clements.....	June 5, 1835..	"	June 27, 1900..	33 33	12 " ...	400 00
Lunenburg..... "	"	J. E. Hebb.....	Nov. 3, 1833..	"	" 7, 1895..	25 00	12 " ...	300 00
New Glasgow..... "	Post office.....	J. A. Mutch.....	Dec. 13, 1840..	"	Oct. 3, 1901..	33 33	12 " ...	400 00
North Sydney..... "	Public building.....	Alex. Green.....	July 16, 1825..	"	" 31, 1897..	33 33	12 " ...	400 00
Pictou..... "	Post office and custom house.	Jas. Arbuckle.....	Feb. 18, 1836..	"	Dec. 20, 1896..	41 66	12 " ...	500 00
Springhill..... "	Post office.....	J. A. Watt.....	Sept. 5, 1849..	"	" 1, 1903..	33 33	12 " ...	400 00
Sydney Mines..... "	Public building.....	C. McMillan.....	Nov. 25, 1857..	"	Jan. 19, 1905..	33 33	12 " ...	400 00
Sydney South..... "	Post office and custom house.	Mrs. M. Keefe.....	Jan. 4, 1850..	"	Jan. 13, 1904..	33 33	12 " ...	400 00
Truro..... "	" "	Alex. P. Smith.....	May 17, 1837..	Caretaker	Apr. 1, 1897..	33 33	12 " ...	400 00
Windsor..... "	Post office.....	J. A. Mosher.....	Nov. 16, 1841..	"	Feb. 13, 1899..	33 33	12 " ...	400 00
Yarmouth..... "	Public building.....	W. H. Whelan.....	Dec. 23, 1841..	"	Mar 1, 1900..	33 33	12 " ...	400 00
Charlottetown..... P.E.I.	Dominion building	Wm. J. Fraser.....	Jan. 1, 1836..	" & engineer	Apr. 3, 1894..	33 33	12 " ...	400 00
" ..... "	"	E. Cameron.....	Nov. 2, 1853..	Messenger.....	Nov. 15, 1906..	41 67	12 " ...	500 00
" ..... "	"	M. A. Allan.....	Aug. 1, 1855..	"	Jan. 24, 1898..	45 83	12 " ...	550 00
" ..... "	"	Angus McKenzie.....	Mar. 12, 1856..	Watchman.....	Nov. 1, 1896..	45 00	12 " ...	540 00
Montague..... "	Public building.....	H. L. Peardon.....	Apr. 13, 1885..	Caretaker.....	Aug. 27, 1906..	13 33	12 " ...	610 00
Souris..... "	Public building.....	Thos. Shea.....	Aug. 11, 1850..	"	Dec. 8, 1906..	29 16	12 " ...	350 00
Summerside..... "	Dominion building.....	A. McSween.....	Sept. 25, 1835..	"	Sept. 1, 1897..	33 33	12 " ...	400 00
Bathurst..... N.B.	Post office.....	J. H. Doucet.....	July 16, 1846..	"	Mar. 26, 1906..	33 33	12 " ...	400 00
Campbellton..... "	Public building.....	W. H. Parker.....	.....	"	Jan. 26, 1906..	33 33	12 " ...	400 00

Chatham	N.B.	Post office	C. Johnston	May 18, 1856	Caretaker	Mar. 27, 1895	25 00	12	months		300 00
Carleton, St. John	"	"	J. S. Clark	Mar. 12, 1860	"	Oct. 28, 1905	8 33	12	"		100 00
Dalhousie	"	"	Wm. Gould	Jan. 1, 1853	"	Nov. 26, 1890	33 33	12	"		400 00
Fredericton	"	"	L. Yerxa	Dec. 18, 1843	"	July 1, 1900	33 33	12	"		400 00
Marysville	"	"	G. W. Foster	Feb. 2, 1836	"	Dec. 23, 1903	12 50	12	"		150 00
Moncton	"	"	E. B. Hicks	Jan. 11, 1832	"	Jan. 11, 1886	33 33	12	"		400 00
Newcastle	"	"	Patrick Keating	Mar. 13, 1840	"	Oct. 23, 1886	33 33	12	"		400 00
Richibucto	"	"	J. Murray	Aug. 16, 1839	"	Feb. 1, 1904	33 33	12	"		400 00
St. John	"	Custom House	Neil J. Morrison	July 25, 1858	Eng. & caretaker	Apr. 27, 1894	60 00	12	"		720 00
"	"	"	Christopher White	Nov. 20, 1844	Fireman	Nov. 9, 1885	50 00	12	"		600 00
"	"	"	James A. Paul	Aug. 1, 1837	Caretaker	Oct. 13, 1891	41 67	12	"		500 00
"	"	Post office	James Wolfe	Mar. 10, 1850	Engineer	Dec. 1, 1893	55 00	12	"		660 00
"	"	"	Edward Hancy	Feb. 22, 1849	Hoist attendant	Nov. 27, 1882	50 00	12	"		600 00
St. Stephen	"	"	Samuel Topping	Apr. 2, 1839	Caretaker	May 25, 1887	33 33	12	"		400 00
Sussex	"	"	Mrs. N. Dryden	June 21, 1840	"	Mar. 26, 1901	25 00	12	"		300 00
Woodstock	"	"	Charles Trafton	Jan. 20, 1839	"	May 1, 1897	33 33	12	"		400 00
"	"	Armoury	A. W. Field	Mar. 25, 1872	Fireman	Oct. 11, 1906	50 00	12	"		600 00
Acton Vale	P.Q.	Post office	V. Lapointe	Dec. 27, 1859	Caretaker	Jan. 3, 1906	33 33	12	"		400 00
Aylmer	"	"	A. Bourgeau	Jan. 23. 1870	"	Apr. 9, 1904	8 33	12	"		100 00
Buckingham	"	"	T. F. Bisson	May 23, 1848	"	Feb. 3, 1903	10 00	12	"		120 00
Coaticook	"	Public building	Israel Baldwin	Nov. 16, 1839	"	June 27, 1889	33 33	12	"		400 00
Drummondville	"	"	A. Paré	Apr. 27, 1842	"	" 5, 1902	33 33	12	"		400 00
Farnham	"	Post office	J. Bélanger	Jan 19, 1867	"	Jan. 30, 1906	8 33	12	"		100 00
Fraserville	"	"	W. D. Raymond	" 7, 1876	"	Apr. 14, 1905	25 00	12	"		300 00
Granby	"	Public building	J. A. Beauchemin	May 1, 1862	"	May 12, 1903	25 00	12	"		300 00
Hochelaga	"	Post office	J. H. Brown	Oct. 7, 1851	"	Mar. 27, 1902	16 66	12	"		200 00
Hull	"	"	J. T Madore	Dec. 1, 1843	"	" 8, 1900	12 50	12	"		150 00
Joliette	"	"	A. Ratel	" 29, 1845	"	Sept. 1, 1897	33 33	12	"		400 00
Lachine	"	"	P. O. Robert	Sept. 7, 1846	"	Jan. 26, 1899	8 33	12	"		100 00
Laprairie	"	"	Jos. Brisson	Nov. 11, 1869	"	Nov. 22, 1901	12 50	12	"		150 00
L'Assomption	"	"	E. Arbour	Dec. 8, 1850	"	July 1, 1904	20 00	12	"		240 00
Longueil	"	"	F. X. Maillé	May 12, 1856	"	Mar. 16, 1906	25 00	12	"		300 00
Montreal	"	Dominion building	J. T. Murphy	May 6, 1865	Foreman engineer	Mar. 2, 1903	100 00	12	"		1,200 00
"	"	"	Ed. Lanctot	Apr. 14, 1837	Caretaker	Dec. 3, 1898	41 67	12	"		500 00
"	"	Examining warehouse	M. Boyer	Feb. 18, 1848	Fireman	Mar. 4, 1882	60 00	12	"		720 00
"	"	"	Art. Lesieur	June 22, 1868	Caretaker	Apr. 8, 1905	45 00	12	"		540 00
"	"	"	Jos. Furgues	May 15, 1871	Fireman	Nov. 2, 1904	50 00	12	"		600 00
"	"	"	Jos. Langevin	Mar. 10, 1850	"	Oct. 18, 1904	50 00	12	"		600 00
"	"	"	A. Nuttall	July 15, 1872	Electrician	June 1, 1905	2 50	Per day			
"	"	"	M. Paisley		Night fireman	Nov. 15, 1906	50 00	8	months		480 00
"	"	"	M. Fitzgerald		Hoist attendant	Jan. 31, 1907	60 00	12	"		720 00
"	"	"	J. B. Desjardins		Cleaner	Jan. 26, 1907	45 00	12	"		540 00
"	"	"	P. Prudhomme	Mar. 7, 1854	Hoist attendant	Mar. 19, 1906	50 00	12	"		600 00
"	"	"	R. Barthe	July 12, 1863	"	May 1, 1906	50 00	12	"		600 00
"	"	"	G. Labelle	May 14, 1871	"	Sept. 12, 1904	50 00	12	"		600 00
"	"	"	S. McGarry	June 15, 1873	"	" 12, 1904	50 00	12	"		600 00
"	"	"	J. Neville	Mar. 18, 1870	"	" 12, 1904	50 00	12	"		600 00
"	"	"	H. Marchand	Sept. 18, 1849	"	Dec. 2, 1888	50 00	12	"		600 00
"	"	"	A. Drouin	June 14, 1868	"	Nov. 28, 1904	50 00	12	"		600 00
"	"	"	Ad. Desjardins	Sept. 3, 1859	Cleaner	June 30, 1905	45 00	12	"		540 00
"	"	"	F. Nadon	June 15, 1847	Cleaner	Dec. 15, 1902	48 00	12	"		576 00
"	"	Post office	N. Bissonnette		Night fireman	May 19, 1907	50 00	12	"		600 00
"	"	"	F. Green	Oct. 4, 1837	Engineer	Jan. 1, 1885	60 00	12	"		720 00
"	"	"	L. D. Thibault	Jan. 28, 1861	Electrician	Dec. 15, 1905	70 00	12	"		840 00
"	"	"	F. X. Lefebvre	Dec. 13, 1859	Asst. electrician	June 28, 1905	55 00	12	"		660 00
"	"	"	I. Trudeau	Jan. 22, 1863	Caretaker	Oct. 1, 1902	50 00	12	"		600 00
"	"	"	Oscar Renaud	Feb. 19, 1862	Elevator man	Sept. 10, 1898	50 00	12	"		600 00
"	"	"	Art. Forget	July 25, 1867	"	Dec. 15, 1893	50 00	12	"		600 00
"	"	"	L. Brault	Dec. 29, 1854	"	Sept. 1, 1901	50 00	12	"		600 00

STATEMENT showing the Names, &c., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings on March 31, 1907.—*Continued.*

Place.		Building.	Name.	Date of Birth.	Position.	Date of Appointment.	Monthly Salary.	Time Employed each Year.	Yearly Salary.
							$ cts.		$ cts.
Montreal	P.Q.	Post office	A. Bourassa	June 1, 1857	Freight hoist att.	Aug. 4, 1893	50 00	12 months	600 00
"	"	"	C. Berthiaume	Nov. 8, 1870	Night watchman	May 5, 1906	50 00	12 "	600 00
"	"	"	O. de Ladurantaye		Pass. hoist att.	Apr. 26, 1906	50 00	12 "	600 00
"	"	"	C. Vadeboncœur	May 17, 1842	Freight hoist att.	Feb. 6, 1864	50 00	12 "	600 00
"	"	"	J. Dutrisac	Feb. 2, 1863	Messenger	Dec. 15, 1893	2 00 p.d.	12 "	730 00
"	"	Inland revenue	Louis St. Jean	Sept. 17, 1840	Fireman	" 1, 1892	50 00	12 "	600 00
"	"	Custom house	C. Dandelin	June 19, 1843	Caretaker	July 16, 1892	37 50	12 "	450 00
"	"	"	H. Valiquette	Dec. 30, 1871	Carpenter	Feb. 1, 1903	65 00	12 "	780 00
"	"	"	G. Flannigan	May 23, 1862	Electrician	Sept. 13, 1906	65 00	12 "	780 00
"	"	Custom house and ex. wareh.	B. Lajeunesse	Nov. 20, 1861	Fireman	Nov. 23, 1896	50 00	12 "	600 00
"	"	Drill hall and armoury	J. Gagné	Apr. 20, 1867	Engineman	Feb. 14, 1899	50 00	12 "	600 00
"	"	Drill hall	A. Crochetiere	June 24, 1884	Fireman	Nov. 1, 1904	50 00	8 "	400 00
Quebec	"	Examining warehouse	D. P. Kennedy	Feb. 9, 1865	Engineer	Nov. 1, 1904	75 00	12 "	900 00
"	"	"	J. G. McLaughlin	Nov. 15, 1880	Fireman	July 4, 1906	53 33	12 "	640 00
"	"	Cullers office	James O'Neil	Aug. 15, 1861	"	Aug. 1, 1894	45 00	12 "	540 00
"	"	Custom office	John R. Mountain	Nov. 1, 1848	"	Nov. 10, 1888	45 00	12 "	540 00
"	"	Post office	J. Roy	Feb. 25, 1836	Caretaker	Sept. 1, 1897	58 33	12 "	700 00
"	"	"	F. J. Cooper	July 8, 1858	Fireman	June 25, 1895	55 00	12 "	660 00
"	"	Governor General Quarters	M. Lewis	May 6, 1871	Caretaker	Sept. 1, 1905	1 50 p.d.	12 "	547 50
Peribonka	"	Immigration building	E. Roy	Dec. 14, 1877	"	Oct. 1, 1902	25 00	12 "	300 00
Roberval	"	" "	J. B. Charbonneau	Aug. 12, 1864	"	Nov. 20, 1901	25 00	12 "	300 00
Rimouski	"	Post office	A. Lepage	Feb. 7, 1866	"	Jan. 1, 1901	12 50	12 "	150 00
Richmond	"	Public building	H. Desmarais	July 14, 1869	"	May 7, 1898	25 00	12 "	300 00
Sherbrooke	"	"	O. Desève	Aug. 6, 1848	"	Apr. 2, 1898	33 33	12 "	400 00
Sorel	"	Post office	C. Robitaille	Jan. 22, 1848	"	Sept. 1, 1897	40 00	12 "	480 00
Saint Henri	"	"	A. C. A. Bissonnette	May 25, 1858	"	Mar. 4, 1895			
Saint Hyacinthe	"	Public building	J. Girouard	Sept. 16, 1838	"	Aug. 2, 1905	33 33	12 "	400 00
"	"	Inland revenue	E. Clapin	Apr. 9, 1844	"	July 19, 1904	33 33	12 "	400 00
"	"	Drill hall	J. B. Yvon	Jan. 4, 1837	Fireman	Dec. 17, 1906	50 00	12 "	600 00
Saint Johns	"	Post office	L. Forrant	" 21, 1849	Caretaker	Apr. 14, 1897	29 16	12 "	350 00
Saint Jérôme	"	Public building	J. Savard	Oct. 24, 1859	"	Sept. 1, 1900	33 33	12 "	400 00
St. Louis du Mile End	"	Post office	M. A. Campeau	Mar. 6, 1846	"	May 28, 1905	33 33	12 "	400 00
Terrebonne	"	Public building	N. Sasseville	Jan. 29, 1844	"	Jan. 2, 1905	25 00	12 "	300 00
Thetford Mines	"	Post office	J. Rousseau	Dec. 22, 1859	"	July 1, 1905	12 50	12 "	150 00
Three Rivers	"	Custom house	Ph. Gravelle	June 3, 1828	"	Feb. 1, 1891	25 00	12 "	300 00
"	"	Post office	A. Gauthier	Feb. 4, 1850	"	" 1, 1898	33 33	12 "	400 00
"	"	Drill hall	A. Pothier	Sept. 25, 1867	Fireman	Mar. 20, 1907	50 00	12 "	600 00
Valleyfield	"	Public building	J. B. Laniel	Oct. 20, 1862	"	Feb. 13, 1905	33 33	12 "	400 00
Victoriaville	"	"	G Beaudet	Feb. 20, 1862	"	Mar. 3, 1904	6 25	12 "	75 00
Alexandria	Ont.	"	D. K. McDonald	July 4, 1847	Caretaker	Oct. 17, 1906	33 33	12 "	400 00

Amherstburg	Ont.	Post office	Mrs. R. Elliott	Dec. 28, 1854	Caretaker	June 6, 1905	33	33	12	months	400 00
Almonte	"	"	Wm. Moulton	Mar. 23, 1839	"	Jan. 9, 1891	33	33	12	"	400 00
Arnprior	"	Public building	R. B. McCreary	Jan. 11, 1862	"	Mar. 15, 1899	33	33	12	"	400 00
Barrie	"	Post office	E. Sivigny	Mar. 19, 1847	"	May 1, 1903	33	33	12	"	400 00
Brockville	"	"	H. Purvis	Sept. 12, 1826	"	Dec. 15, 1900	33	33	12	"	400 00
Brantford	"	"	John Squire	Apr. 24, 1842	"	Oct. 27, 1880	50	00	12	"	600 00
Bridgeburg	"	Public building	Wm. Hanna	Aug. 15, 1863	"	" 3, 1905	25	00	12	"	300 00
Bowmanville	"	"	W. W. Allin	Jan. 13, 1850	"	Feb. 10, 1905	33	33	12	"	400 00
Belleville	"	Post office	S. Haight	Aug. 26, 1857	"	Jan. 24, 1901	50	00	12	"	600 00
Berlin	"	"	J. Clemens	June 21, 1840	"	May 15, 1900	33	33	12	"	400 00
Brampton	"	"	J. Foster	Sept. 16, 1846	"	Aug. 1, 1906	33	33	12	"	400 00
Carleton Place	"	"	Jas. F. Halfpenny	Apr. 17, 1858	"	May 13, 1892	25	00	12	"	300 00
Chatham	"	"	W. W. Mitchell	May 25, 1848	"	Jan. 7, 1885	41	66	12	"	500 00
"	"	Armoury	T. W. Stephenson	Oct. 9, 1864	Fireman	Oct. 9, 1906	50	00	12	"	600 00
Cornwall	"	Post office	R. Conroy	Nov. 6, 1848	Caretaker	Apr. 1, 1897	33	33	12	"	400 00
Cayuga	"	"	G. A. Gibson	May 29, 1861	" &c	Sept. 3, 1891	4	16	12	"	50 00
Clinton	"	"	J. Scott	Jan. 21, 1856	"	Feb. 9, 1904	16	66	12	"	200 00
Cobourg	"	"	J. Staples	June 3, 1834	"	Dec. 10, 1906	33	33	12	"	400 00
Deseronto	"	Public building	M. Hart	Jan. 15, 1862	"	July 1, 1903	33	33	12	"	400 00
Dundas	"	"	Wm. Graham	Dec. 5, 1853	"	" 1, 1898	4	16	12	"	50 00
Fort William	"	"	D. J. McCallum	Apr. 5, 1834	"	Sept. 21, 1904	33	33	12	"	400 00
Galt	"	"	T. Barrett	June 17, 1861	"	Aug. 1, 1902	33	33	12	"	400 00
Guelph	"	"	R. McLeod	July 30, 1865	"	May 25, 1901	33	33	12	"	400 00
Goderich	"	" &c	G. Bissett	Apr. 14, 1851	"	Sept. 1, 1897	33	33	12	"	400 00
Hamilton	"	Dominion building	Alfred Barnard	Dec. 27, 1847	"	Dec. 10, 1894	50	00	12	"	600 00
"	"	"	J. Wigglesworth	Aug. 7, 1863	Fireman	Oct. 1, 1896	50	00	12	"	600 00
"	"	"	Thomas Nicholson	Dec. 17, 1857	Engineer	Mar. 2, 1887	50	00	12	"	600 00
"	"	Inland revenue building	C. Blackman	May 23, 1850	Caretaker	Jan. 9, 1905	12	00	12	"	144 00
Hawkesbury	"	Public building	A. Marleau	Sept. 22, 1857	"	Aug. 7, 1906	33	33	12	"	400 00
Ingersoll	"	"	John McDonald	June 30, 1841	"	Nov. 20, 1900	33	33	12	"	400 00
Kingston	"	Royal Military College	T. Harrison	Aug. 21, 1875	Fireman	May 1, 1902	p. d. 1	50	12		547 50
"	"	Armoury	F. Forsythe	Nov. 15, 1866	Engineer	Feb. 11, 1904	50	00	12	"	600 00
"	"	Royal Military College	Wm. Hazlett	May 27, 1874	"	Nov. 20, 1900	75	00	12	"	900 00
"	"	" "	J. Quigley	Oct. 30, 1857	Fireman	June 1, 1903	55	00	12	"	660 00
"	"	" "	M. Redmond	" 2, 1867	"	Jan. 29, 1902	45	00	12	"	540 00
"	"	" "	L. Cochrane	Mar. 1, 1879	Electrician	July 29, 1902	55	00	12	"	660 00
"	"	Post office	Jas. Kehoe	June 21, 1873	Caretaker	May 15, 1905	48	33	12	"	580 00
London	"	Custom house	M. Mulkern	Sept. 4, 1837	Engineman	Sept. 18, 1888	50	00	12	"	600 00
"	"	"	Wm. Greer	Oct. 12, 1839	Caretaker	Mar. 16, 1884	33	33	12	"	400 00
"	"	Post office	John Price	" 6, 1836	Engineer	Jan. 14, 1884	50	00	12	"	600 00
"	"	"	J. Gilbanks	Dec. 4, 1861	Caretaker	May 31, 1906	33	33	12	"	400 00
"	"	Drill hall	A. Maclean	Nov. 21, 1851	Engineer	Dec. 1, 1904	60	00	12	"	720 00
Lindsay	"	Post office and custom house	Wm. Galbraith	Jan. 8, 1844	Caretaker	Nov. 17, 1893	33	33	12	"	400 00
Napanee	"	" "	Mrs. C. E. Webster	July 12, 1846	"	Oct. 4, 1901	33	33	12	"	400 00
Niagara Falls	"	Public building	Wm. J. Sheppard	Jan. 4, 1854	"	Jan. 15, 1897	33	33	12	"	400 00
Orangeville	"	"	D. McPherson	Apr. 30, 1851	"	July 15, 1900	33	33	12	"	400 00
Orillia	"	"	John Frawley	Mar. 14, 1844	"	Nov. 1, 1898	29	16	12	"	350 00
Oshawa	"	"	A. Brodie	Sept. 28, 1850	"	Dec. 11, 1905	33	33			400 00
Ottawa	"	Observatory	A. Villeneuve	Mar. 11, 1857	"	" 14, 1904	50	00			600 00
"	"	"	G. Sparks	Oct. 16, 1858	Engineer	Nov. 1, 1904	60	00			720 00
Paris	"	Public building	Sam Lee	" 24, 1841	Caretaker	July 7, 1902	33	33	12	months	400 00
Peterborough	"	Post office	John Irwin	May 17, 1842	"	Sept. 8, 1887	25	00	12	"	300 00
"	"	Custom house	Wm. Taylor	Nov. 25, 1839	"	Jan. 26, 1899	25	00	12	"	300 00
Petrolea	"	Post office	James Shaw	June 11, 1842	"	Sept. 12, 1904	33	33	12	"	400 00
Picton	"	Public building	D. Welbanks	Feb. 8, 1850	"	Apr. 11, 1902	33	33	12	"	400 00
Port Arthur	"	"	D. McKenzie	Sept. 12, 1843	"	May 14, 1906	25	00	12	"	300 00
Port Colborne	"	Post office	Wm. Armstrong	" 9, 1846	"	June 11, 1888	25	00	12	"	300 00
Port Hope	"	"	Jos. Curtis	—— —, 1884	"	May 1, 1905	33	33	12	"	400 00
Pembroke	"	Public building	Samuel Hamilton	June 4, 1834	"	Oct. 29, 1890	33	33	12	"	400 00
Prescott	"	Post office	R Birks	Apr. 6, 1822	"	May 1, 1899	33	33	12	"	400 00

STATEMENT showing the Names, &c., of the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings on March 31, 1907.—*Concluded.*

Place.	Building.	Name.	Date of Birth.	Position.	Date of Appointment.	Monthly Salary.	Time Employed each Year.	Yearly Salary.
						$ cts.		$ cts.
Rat Portage..... Ont.	Public building.....	Mrs. J. Link.....	May 10, 1850..	Caretaker.....	Dec. 7, 1901..	33 33	12 months...	400 00
Sarnia..... "	"	J. H. Dyble.....	Aug. 25, 1860..	"	Nov. 7, 1903..	33 33	12 " ...	400 00
Smith's Falls..... "	"	R. W. Lewis.....	" 19, 1863..	"	Jan. 8, 1896..	33 33	12 " ...	400 00
Stratford..... "	Post office, &c.....	J. P. Murray.....	July 29, 1850..	Engineer.....	" 26, 1900..	50 00	12 " ...	600 00
" " ..... "	Public building.....	J. A. Carey.....	" 4, 1856..	Fireman.....	" 24, 1907..	50 00	12 " ...	600 00
Sault Ste. Marie..... "	"	P. J. Racine.....	Sept. 25, 1865..	Caretaker.....	Sept. 29, 1905..	33 33	12 " ...	400 00
St. Catharines..... "	Armouries.....	T. Munday.....	Mar. 20, 1840..	Engineer.....	Feb. 2, 1907..	50 00	12 " ...	600 00
" ..... "	Post office, &c.....	A. Clark.....	Sept. 14, 1850..	Caretaker.....	Dec. 12, 1904..	33 33	12 " ...	400 00
St. Thomas..... "	"	G. Luton.....	May 25, 1857..	"	Apr. 14, 1903..	33 33	12 " ...	400 00
Strathroy..... "	Public building.....	Wm. J. Johnston.....	" 12, 1840..	"	Oct. 25, 1890..	33 33	12 " ...	400 00
Toronto..... "	Dominion buildings.....	H. E. Hamilton.....	Apr. 14, 1838..	Foreman, engineer	Apr. 10, 1902..	100 00	12 " ...	1,200 00
" ..... "	Inland revenue building....	C. H. Baillie.....	Sept. 22, 1852..	Fireman.....	Jan. 13, 1891..	55 00	12 " ...	660 00
" ..... "	Custom house.....	H. Drinkwine.....	—— —, 1874..	"	Oct. 16, 1906..	55 00	12 " ...	660 00
" ..... "	"	Ed. Switzer.....	Oct. 10, 1856..	Hoist attendant..	Aug. 18, 1901..	55 00	12 " ...	660 00
" ..... "	"	T. J. Enright.....	—— —, 1862..	Caretaker.....	Dec. 18, 1906..	50 00	12 " ...	600 00
" ..... "	Examining warehouse.....	James Cosgrove.....	Feb. 10, 1844..	Engineer.....	" 28, 1874..	70 00	12 " ...	840 00
" ..... "	"	Ed. Appleton.....	Sept. 26, 1864..	Fireman.....	Sept. 23, 1886..	60 00	12 " ...	720 00
" ..... "	"	Alexander Day.....	" 27, 1863..	Hoist attendant..	Dec. 1, 1887..	50 00	12 " ...	600 00
" ..... "	"	F. Simpson.....	Jan. 8, 1859..	"	Sept. 1, 1903..	50 00	12 " ...	600 00
" ..... "	"	Thos. Jones.....	Nov. 10, 1853..	Watchman.....	Apr. 4, 1902..	50 00	12 " ...	600 00
" ..... "	"	Wm. Scott.....	—— —, 1838..	Watchman.....	June 1, 1905..	2 00	p. d.....	730 00
" ..... "	Union station.....	J. Gormally.....	" 26, 1872..	Hoist attendant.	Oct. 17, 1901..	50 00	12 " ...	600 00
" ..... "	"	W. P. Murphy.....	Sept. 16, 1868..	Elevatorman.....	Sept. 28, 1905..	50 00	12 " ...	600 00
" ..... "	P. O. station.....	James Rae.....	Feb. 17, 1864..	Caretaker.....	Jan. 12, 1904..	41 66	12 " ...	500 00
" ..... "	Post office.....	J. Somers.....	Apr. 8, 1835..	Engineer.....	Oct. 9, 1897..	55 00	12 " ...	660 00
" ..... "	"	P. Cassidy.....	May 2, 1862..	Fireman.....	May 8, 1906..	55 00	8 " ...	440 00
" ..... "	"	T. Letray.....	—— —, 1858..	"	Jan. 10, 1907..	55 00	8 " ...	440 00
" ..... "	Post office.....	W. J. Graham.....	Mar. 16, 1840..	Fireman.....	Oct. 1, 1896..	60 00	12 " ...	720 00
" ..... "	Junction.....	J. Devins.....	July 18, 1847..	Caretaker.....	Feb. 3, 1905..	33 33	12 " ...	400 00
" ..... "	Drill hall.....	Richard Eyre.....	Oct. 11, 1849..	Fireman.....	Mar. 25, 1895..	55 00	12 " ...	660 00
" ..... "	"	D. Glionna.....	Aug. 8, 1867..	"	Oct. 1, 1898..	60 00	12 " ...	720 00
Trenton..... "	Public building.....	David Allan.....	May 13, 1844..	Caretaker.....	Aug. 31, 1889..	33 33	12 " ...	400 00
Walkerton..... "	"	Mrs. T. Gibson.....	Jan. 21, 1861..	"	May 12, 1905..	33 33	12 " ...	400 00
Windsor..... "	Post office.....	I. Bellepercbe.....	Oct. 26, 1848..	Engineman.....	Dec. 24, 1897..	50 00	12 " ...	600 00
" ..... "	"	W. Curtis.....	Mar. 6, 1844..	Caretaker.....	Nov. 9, 1880..	33 33	12 " ...	400 00
" ..... "	Drill hall.....	W. Wheeler.....	Sept. 27, 1874..	Engineer.....	Jan. 9, 1905..	50 00	12 " ...	600 00
Wingham..... "	Public building.....	P. Fisher.....	Dec. 12, 1832..	Caretaker.....	Nov. 19, 1906..	16 16	12 " ...	200 00
Woodstock..... "	"	Robert Kerr.....	June 6, 1864..	Engineer.....	Dec. 11, 1901..	33 33	12 months...	400 00
Brandon..... Man.	"	T. Giles.....	Mar. 30, 1843..	"	Aug. 1, 1897..	50 00	12 " ...	600 00
Portage-la-Prairie... "	"	J. S. Telfer.....	July 25, 1840..	"	July 1, 1904..	45 00	12 " ...	540 00
Winnipeg..... "	Post office.....	Jos. Hay.....	May 4, 1853..	Engineman.....	" 20, 1905..	75 00	12 " ...	900 00
" ..... "	"	Jas. Boggins.....	July 10, 1857..	Fireman.....	June 27, 1906..	65 00	12 " ...	780 00

Winnipeg	Man.	Post office	Joseph Coutu	May 10, 1843	Hoist attendant	Mar. 16, 1887	55 00	12	months	660 00
"	"	"	A. Boiteau	Sept. 23, 1860	Watchman	Apr. 4, 1905	55 00	12	"	660 00
"	"	"	P. Johnson	May 31, 1881	Caretaker	Oct. 19, 1904	50 00	12	"	600 00
"	"	Custom house	G. K. Williams	Apr. 15, 1862	Fireman	Apr. 4, 1904	45 00	12	"	540 00
"	"	Public building	Wm. Johnson	June 14, 1867	Carpenter	Sept. 1, 1906	65 00	12	"	780 00
Calgary	Alta.	Post office	E. N. Brown	Mar. 8, 1845	Caretaker	Jan. 24, 1891	45 00	12	"	540 00
Edmonton	"	Land and registry office	R. Wylie	July 7, 1859	"	June 21, 1894	41 66	12	"	500 00
"	"	Post office	E. G. Henry		"	Mar. 9, 1907	2 00 p.d.	12	"	730 00
Lethbridge	"	Public building	D. Pelletier	Aug. 4, 1854	"	Dec. 17, 1905	45 00	12	"	540 00
Moosejaw	Sask.	"	R. West	Sept. 12, 1855	"	Sept. 21, 1906	50 00	12	"	600 00
Prince Albert	"	Land and registry office	Mme G. Cassie	——— 1834	"	Jan. 1, 1904	33 33	12	"	400 00
"	"	Public building	R. D. Robertson	Aug. 18, 1877	"	Jan. 15, 1906	50 00	12	"	600 00
Regina	"	Land office	W. J. Gore	July 22, 1863	"	May 6, 1901	50 00	12	"	600 00
"	"	"	T. Perkins		"	Sept. 24, 1906	50 00	12	"	600 00
"	"	Post office	John Malcolmson	Nov. 9, 1857	"	" 5, 1906	50 00	12	"	600 00
Atlin	B.C.	Public building	J. A. Fraser	Jan. 1, 1851	"	June 26, 1901	12 50	12	"	150 00
Kamloops	"	Post office	J. R. McNabb	Sept. 6, 1852	"	Sept. 19, 1905	50 00	12	"	600 00
Nanaimo	"	Public building	J. Thompson	" 2, 1836	"	May 1, 1897	50 00	12	"	600 00
Nelson	"	"	B. B. Smith	" 12, 1845	"	Mar. 9, 1903	50 00	12	"	600 00
New Westminster	"	Post office	L. Thornbar	Apr. 4, 1846	"	July 11, 1906	50 00	12	"	600 00
Rossland	"	Public building	H. McQuade	Dec. 24, 1851	"	Aug. 1, 1906	50 00	12	"	600 00
Vancouver	"	"	A. Chisholm	Apr. 18, 1851	"	Oct. 1, 1903	50 00	12	"	600 00
"	"	"	P. Powers	Mar. 21, 1836	Watchman	Feb. 10, 1901	50 00	12	"	600 00
"	"	"	C. F. Bosomworth	Oct. 1, 1848	Asst. caretaker	July 7, 1904	50 00	12	"	600 00
Victoria	"	New Dominion building	Wm. McKay	Dec. 31, 1857	Caretaker	Feb. 4, 1898	50 00	12	"	600 00
"	"	Dominion building	A. Johnson	May 12, 1858	Asst. caretaker	Apr. 1, 1899	60 00	12	"	720 00
"	"	"	T. Campbell	June 24, 1848	Fireman	Oct. 1, 1906	45 00	12	"	540 00
"	"	"	J. McMillan	July 8, 1876	Elevatorman	Nov. 27, 1898	60 00	12	"	720 00
"	"	"	Jas. Parfitt	Feb. 10, 1867	"	June 1, 1905	60 00	12	"	720 00
"	"	Old custom house	Geo. Lyall	" 12, 1843	Caretaker	May 8, 1900	60 00	12	"	720 00
Dawson	Y.T.	Post office	J. W. Wilson	Aug. 18, 1873	"	Jan. 1, 1902	160 00	12	"	1,920 00
"	"	"	J. K. Johnston	Apr. 17, 1883	Nightman	Oct. 17, 1904	160 00	12	"	1,920 00
"	"	"	Mrs. McKenzie	Apr. 2, 1878	Charwoman	Nov. 1, 1905	150 00	12	"	1,800 00
"	"	Administration building	J. H. Mulligan	Sept. 9, 1865	Caretaker	Dec. 1, 1901	160 00	12	"	1,920 00
"	"	" "	J. Boutin	Oct. 13, 1876	Nightman	" 1, 1901	160 00	12	"	1,920 00
"	"	" "	Mrs. A. Misner	Sept. 6, 1860	Charwoman	" 1, 1901	150 00	12	"	1,800 00
"	"	" "	Mrs. E. Heacock	July 1, 1865	"	Feb. 18, 1903	150 00	12	"	1,800 00
"	"	Government house	P. P. McDonald	Oct. 8, 1879	Caretaker	Dec. 1, 1905	160 00	12	"	1,920 00
"	"	Police court	J. B. Deslauriers	July 12, 1875	"	June 1, 1906	160 00	12	"	1,920 00
"	"	Court house	H. DeVilliers	May 7, 1872	"	May 21, 1902	160 00	12	"	1,920 00
White Horse	"	Public building	C. J. McLennan	Dec. 22, 1850	"	Oct. 30, 1902	125 00	12	"	1,500 00

JOS. VINCENT.

OFFICIAL CORRESPONDENCE

DEPARTMENT OF PUBLIC WORKS

FROM

JULY 1, 1867, TO MARCH, 31, 1907

OFFICIAL CORRESPONDENCE.

Letters Received and Sent from July 1, 1867, to March 31, 1907.

Year.	Received.	Sent.
1867—From July 1 to December 31	2,075	1,511
1868 " January 1 to December 31	3,498	2,317
1869 " " "	3,448	2,171
1870 " " "	4,961	3,185
1871 " " "	6,268	3,983
1872 " " "	8,333	4,428
1873 " " "	10,072	5,707
1874 " " "	9,800	5,043
1875 " " "	9,006	5,006
1876 " " "	7,971	4,773
1877 " " "	7,517	4,425
1878 " " "	6,886	4,021
1879 " " to October 6	7,186	4,547
1879 " October 7 to December 31	2,033	810
1880 " January 1 "	8,451	4,411
1881 " " "	9,599	5,529
1882 " " "	10,505	5,699
1883 " " "	11,633	6,227
1884 " " "	13,114	6,903
1885 " " "	8,977	5,321
1886 " " "	9,644	5,352
1887 " " to June 30	4,866	2,735
1887 " July 1 " 1888	10,493	6,343
1888 " " " 1889	10,522	7,042
1889 " " " 1890	10,098	7,448
1890 " " " 1891	10,576	7,286
1891 " " " 1892	11,637	6,700
1892 " " " 1893	11,720	6,220
1893 " " " 1894	9,517	6,028
1894 " " " 1895	10,190	5,148
1895 " " " 1896	10,223	5,573
1896 " " " 1897	11,404	5,033
1897 " " " 1898	9,640	5,250
1898 " " " 1899	9,639	4,784
1899 " " " 1900	12,139	5,938
1900 " " " 1901	13,179	6,255
1901 " " " 1902	15,880	5,067
1902 " " " 1903	13,140	6,373
1903 " " " 1904	11,300	5,878
1904 " " " 1905	11,940	6,461
1905 " " " 1906	11,700	6,472
1906 " " to March 31, 1907	9,400	5,085

LETTERS Sent from Chief Engineer's Office, from January 1880, to March 31, 1907.

Year.	——	Number.
1880	From January 10 to June 30	418
1880	" July 1 " 1881	1,795
1881	" " " 1882	2,352
1882	" " " 1883	2,651
1883	" " " 1884	3,611
1884	" " " 1885	3,119
1885	" " " 1886	2,867
1886	" " " 1887	3,281
1887	" " " 1888	3,552
1888	" " " 1889	4,229
1889	" " " 1890	3,374
1890	" " " 1891	3,948
1891	" " " 1892	4,009
1892	" " " 1893	4,232
1893	" " " 1894	3,966
1894	" " " 1895	4,603
1895	" " " 1896	4,239
1896	" " " 1897	4,994
1897	" " " 1898	4,696
1898	" " " 1899	5,277
1899	" " " 1900	7,366
1900	" " " 1901	4,341
1901	" " " 1902	6,759
1902	" " " 1903	4,327
1903	" " " 1904	5,295
1904	" " " 1905	5,496
1905	" " " 1906	8,036
1906	" " to March 31, 1907	3,771

NOTE.—The letters, including returns, received in the Chief Engineer's Office may be estimated at the rate of two received to one sent.

LETTERS Received and Sent, Chief Architect's Office, from January 1, 1880, to March 31, 1907.

——	Received.	Sent.
1880—From January 1 to June 30	.....	1,273
1880 " July 1 " 1881	.....	2,943
1881 " " " 1882	.....	2,859
1882 " " " 1883	3,538	4,600
1883 " " " 1884	3,860	6,004
1884 " " " 1885	4,500	6,718
1885 " " " 1886	6,075	6,450
1886 " " " 1887	6,816	6,380
1887 " " " 1888	6,947	6,870
1888 " " " 1889	6,484	7,667
1889 " " " 1890	7,448	6,578
1890 " " " 1891	.....	7,751
1891 " " " 1892	6,113	4,260
1892 " " " 1893	7,428	6,453
1893 " " " 1894	6,900	4,517
1894 " " " 1895	7,538	5,327
1895 " " " 1896	7,843	5,783
1896 " " " 1897	10,700	8,200
1897 " " " 1898	10,867	8,547
1898 " " " 1899	10,913	8,762
1899 " " " 1900	12,386	9,878
1900 " " " 1901	12,287	9,860
1901 " " " 1902	12,560	10,330
1902 " " " 1903	13,430	11,106
1903 " " " 1904	14,710	15,590
1904 " " " 1905	15,000	14,300
1905 " " " 1906	15,785	14,785
1906 " " to March 31, 1907	13,768	12,087

DEPARTMENT OF PUBLIC WORKS OF CANADA

Honourable WILLIAM PUGSLEY, Minister

GEORGIAN BAY SHIP CANAL SURVEY

REPORT

ON THE

PRECISE LEVELLING

YEARS 1904 TO 1907

PRINTED BY ORDER OF PARLIAMENT

OTTAWA
PRINTED BY S. E. DAWSON, PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1908

[No. 19*a*—1908.]

DEPARTMENT OF PUBLIC WORKS OF CANADA

HONOURABLE WILLIAM PUGSLEY, MINISTER.

A. GOBEIL, I.S.O., DEPUTY MINISTER.

GEORGIAN BAY SHIP CANAL SURVEY

PRECISE LEVELLING

FROM ROUSES' POINT, IN THE STATE OF NEW YORK, TO GEORGIAN BAY, ON LAKE HURON VIA MONTREAL, VAUDREUIL, OTTAWA, PEMBROKE, MATTAWA, NORTH BAY AND THE FRENCH RIVER, AND FROM TORONTO TO NORTH BAY, VIA GRAND TRUNK RAILWAY, INCLUDING VARIOUS BRANCH LINES.

YEARS 1904 TO 1907

CHAS. F. X. CHALONER, *in charge of party*

ASSISTED BY

EUG. GINGRAS, H. J. DUNNE AND J. L. KINGSTON

UNDER THE DIRECTION OF

EUGENE D. LAFLEUR, *Chief Engineer.*

ARTHUR ST. LAURENT, *Ass't Chief Engineer and Engineer-in-Charge.*

C. R. COUTLEE, S. J. CHAPLEAU, *District Engineers.*

DEPARTMENT OF PUBLIC WORKS OF CANADA,

GEORGIAN BAY SHIP CANAL,
CHIEF ENGINEER'S OFFICE,
OTTAWA, January 15, 1908.

Honourable WILLIAM PUGSLEY,
Minister,
Department Public Works.

SIR,—We have the honour to transmit herewith our final report on the precise levelling carried out in connection with the Georgian Bay Ship Canal survey during the years 1904, 1905 and 1906.

The field party was under the charge of Mr. Charles F. X. Chaloner, who was assisted by Messrs. Eugene Gingras, H. J. Dunne and J. L. Kingston.

We take this opportunity of commending the admirable work done by Mr. Chaloner and his party. Neither time nor energy was spared to make a success of the work, which was performed with the greatest good will and ability, under most adverse climatic conditions, and during unfavourable seasons of the year when precise levelling has generally to be stopped on account of the degree of precision which has to be attained. That the work, even under these conditions, was extremely satisfactory will be shown in the report, and great credit is due to Mr. Chaloner and his staff.

We have the honour to be,
Sir,
Your obedient servants,

EUGENE D. LAFLEUR,
Chief Engineer.

A. ST. LAURENT,
Ass't Chief Engineer,
and Engineer-in-Charge.

CONTENTS.

PAGE.

INTRODUCTION.... 7
Brief history of Geodetic Levelling in Canada.... 7
Precise level party and programme followed.... 8
Soulanges Canal determination.... 8
Comparison of different determinations.... 9
Canal levels.... 10
PRECISE LEVELLING.... 11
Distances covered and routes followed.... 11
Lachine to Coteau Landing.... 11
Vaudreuil to St. Eugene.... 12
The Brook to St. Eugene.... 12
The Brook to Ottawa.... 12
Carp to Ottawa.... 13
Carp to Sand Point.... 13
Haley's to Sand Point.... 13
Haley's to Pembroke.... 14
Chalk River to Pembroke.... 14
Chalk River to Mackey's.... 14
Deux Rivieres to Mackey's.... 14
Deux Rivieres to Eau Claire.... 15
North Bay to Eau Claire.... 15
Cornwall to Coteau Landing.... 16
Lachine to St. Johns.... 17
Rouses' Point to St. Johns.... 18
Toronto to Newmarket.... 20
Barrie to Newmarket.... 21
Barrie to Collingwood.... 21
Barrie to Longford.... 21
Orillia to Midland.... 21
Falkenburg to Longford.... 22
Falkenburg to Scotia Junction.... 22
South River to Scotia Junction.... 22
South River to North Bay.... 23
Coteau Junction to Aubrey.... 23
Rouses' Point to Aubrey.... 24
Lachine to Coteau Junction.... 24
Accuracy of results.... 25
Results, comparisons and adjustments.... 26
Datum.... 26
Rouses' Point to Coteau Landing.... 26
Vaudreuil to North Bay.... 27

CONTENTS—*Concluded.*

PAGE.

Lake Ontario, water level transfers 28
Simultaneous gaugings, Tibbett's Point, N. Y., Toronto, Ont. 28
Lake Huron, water level transfers 29
Simultaneous gaugings, Harbour Beach, Mackinaw City, Collingwood 29
Adjustment, Toronto to Collingwood 29
Simultaneous gaugings, Collingwood, Waubaushene, Harbour Beach 29
Adjustment, Toronto to Waubaushene 29
Simultaneous gaugings, Collingwood, Midland, Harbour Beach 30
Adjustment, Waubaushene to Midland 30
Adjustment, Orillia to North Bay 30
Simultaneous gaugings, Harbour Beach, Mackinaw City, French River 30
Adjustment, French River to North Bay 31
Checking of precise levels by water level transfers 31
Comparisons, differences, &c. 32
Instrument used and method followed 34
Cost of precise levelling 35
Tables of elevations 35
General explanations 36
List of most important bench marks, with diagrams, showing location 37
Rouses' Point to Cornwall 37
Via St. Johns, Victoria bridge, Lachine, Vaudreuil, Coteau Landing.
Vaudreuil to North Bay 53
Via Rigaud, Ottawa, Renfrew, Pembroke, Mattawa.
Toronto to North Bay 73
Via Newmarket, Barrie, Collingwood, Orillia, Midland, Burks' Falls, Nipissing Junction.
Rouses' Point to Montreal 99
Via Lacolle Junc., Howick Junc., Valleyfield, Coteau Junc., Lachine.
Complete list of bench marks and elevations 111
Rouses' Point to Cornwall 111
Via St. Johns, Victoria bridge, Lachine, Vaudreuil, Coteau Landing.
Vaudreuil to North Bay 116
Via Rigaud, Ottawa, Renfrew, Pembroke, Mattawa.
Toronto to North Bay 126
Via Newmarket, Barrie, Collingwood, Orillia, Midland, Burks' Falls, Nipissing Junction.
Rouses' Point to Montreal 139
Via Lacolle Junc., Howick Junc., Valleyfield, Coteau Junc., Lachine.
French River—Lake Nipissing to Georgian Bay 144
Notes regarding mean tide level at Quebec 146
Elevations of low water surface at different points along proposed canal route 147
Index of places where bench marks have been located 151
Map showing routes followed by different precise level parties .....
Sketch showing comparative elevations of datums at Montreal 110

GEORGIAN BAY SHIP CANAL SURVEY.

PRECISE LEVELLING.

INTRODUCTION.

In organizing the field force for the survey of the Georgian Bay Ship Canal route, the formation of a field party for the determination of a common plane of reference for the different sections of the survey, to which all elevations could be referred, was naturally of primary importance.

As the work on the various sections of the survey, extending from Montreal to the Georgian Bay, a distance of 440 miles, commenced at the same time, it was impossible to initiate the levelling on the different sections from a common datum, and each party had to assume a convenient and arbitrary plane of reference for preliminary levelling until such time as it would be possible to connect their net of elevations to a common line of precise levelling.

In geodetic work the plane of reference adopted is mean sea level, and all elevations are referred to that plane which is obviously of great advantage, for all reductions, comparisons, &c.

Unfortunately, in this country geodetic work is yet in its infancy, and when this survey was commenced there was no system of permanent bench marks, having received their final determination above mean sea level, which could be conveniently tapped from the different sections to be surveyed, except perhaps the levelling done in connection with the Soulanges canal by the Department of Railways and Canals.

In 1883, under the direction of Mr. R. Steckel, C.E., for the Department of Public Works of Canada, a geodetic levelling party was formed, and operated mainly along the Richelieu and St. Lawrence rivers, establishing permanent bench marks and working gradually towards the Atlantic, where a series of tidal observations have been carried on by the Department of Marine and Fisheries, from which records it will be possible, ultimately, to establish a mean tide level in connection with this geodetic levelling. Unfortunately, this work was often interrupted on account of lack of funds and for other reasons, and no final determination has yet been made. It is expected, however, that final results will be available in a year or two, and it is highly important that the work already commenced be gradually extended, and that precise levelling be systematically carried on as a permanent branch of the service.

Very valuable and interesting information in connection with this work can be found in Mr. Steckel's able reports to the Minister of Public Works for the years 1885, 1891, 1898, and 1906.

On the other hand, systematic precise levelling and tidal observations have been carried on in the United States by the Coast and Geodetic Survey, by the Geological Survey, and by the Corps of Engineers for a great many years, and an extensive net of permanent bench marks, with known elevations above mean sea level, as a common datum for all chart work has been established and is being gradually extended.

For a work of such magnitude as that of the canal survey, it was at once recognized as a necessity that a precise levelling party be formed to check finally the transfers already made of the U. S. Coast and Geodetic determinations to our territory, and carry on the same system all along the route of the proposed waterway.

This naturally necessitated a relatively large expenditure, but the character and nature of the work demanded it. Moreover the usefulness of the work as carried out is not limited only to the canal investigation. Permanent bench marks have been established which can be used for other works as initial points for level lines, and the whole levelling has been done with a view of being utilized later in a systematic determination of a common plane for all Canadian harbours on the Great Lakes, which work it is respectfully suggested should be undertaken at once.

PRECISE LEVEL PARTY AND PROGRAMME FOLLOWED.

The precise level party was placed under the charge of Mr. Chas. F. X. Chaloner, who has been doing geodetic levelling for the Department for many years, under the direction of Mr. Steckel, and certainly no better man could have been secured to undertake this work, which required extreme accuracy and great experience.

The programme carried out was the immediate transfer of the elevation of the Coteau Landing bench mark as determined for the Soulanges canal to section No. 1 of the survey; check lines from the U. S. Coast and Geodetic bench mark at Rouses' Point, N. Y., to Coteau Landing and Cornwall; main line from Montreal to North Bay, thence to the mouth of the French river along the proposed waterway, and check line from Toronto to North Bay, with branch lines at different places as given further in detail, in all 945 miles of levelling.

In conjunction with this, automatic gauges were placed at Toronto, Collingwood and French River Harbour, to collect the necessary data for checking precise level lines by water level transfers from United States permanent gauge stations.

The determinations by water level transfer were placed under the direct supervision of Mr. District Engineer, S. J. Chapleau, and a digest of the results is given at the end of this report.

SOULANGES CANAL DETERMINATION AND COMPARISONS.

In regard to the determination of the elevation of the Coteau Landing bench mark by the Soulanges canal staff, during construction, and the final establishment of the elevation of the initial bench mark at Rouses' Point, N. Y., with comparison of results between different operators, the following interesting information was compiled by Mr. District Engineer S. J. Chapleau, and submitted in a report dated June 12, 1905:—

'I beg to call your attention to the following data and recommendations in connection with the final establishment of the elevation of the initial bench mark at Coteau Landing, Que., to which the levels of the canal system, now under investigation, are at present being referred, as upon this bench depends the final reduction of all such levels to that one datum common to all the charts of the Great Lakes, and which result it is most desirable to obtain.

The bench mark above referred to is:—An iron bolt in the southwest corner of the south abutment of the Canada Atlantic Railway bridge over the main road between Coteau Landing and Coteau du Lac, Que., south side of the Soulanges canal.

This Coteau Landing bench mark was connected with the bench mark on the guard lock, Valleyfield, Que., by duplicate lines of levels run via the Canada Atlantic Railway bridge over the St. Lawrence river between Coteau and Valleyfield, and results checked several times by water level transfer and found to be absolutely correct; and the bench mark on the guard lock, Valleyfield, connected by duplicate lines of levels with the international bench mark at Rouses' Point, N. Y., via the Canada Atlantic and Grand Trunk Railways.

The above was carried out under the direction of the late Thomas Munro, M.I.C.E., Mem. Can. Soc. C. E., by Messrs. Allison and Pinhey, Mems. Can. Soc. C. E., during the summer and fall of 1899, during the collection of data bearing on the determination of the Soulanges canal construction datum.

During 1898 the U. S. D. W. Engineers, under the direction of the late Frank A. Davis, ran a duplicate line of levels between the international bench mark at Rouses' Point, N. Y.,

and the bench mark on the guard lock at Valleyfield, Que. Elevations and description of the above terminal benches, and comparative results of these two duplicate lines, are given below:

Rouses' Point.—The United States Coast and Geodetic bench mark is the top of the plinth course, north end of the Chapman building, at Rouses' Point, N. Y., marked thus ⊕. Elevation 110.06.

Valleyfield.—Coping of north wall of lock 14 (guard lock) at Valleyfield, Que., Beauharnois canal, behind heel of post of upper gate.

Canadian determination	156.67
United States determination	156.791
Difference	.121

In the opinion of A. J. Grant, C.E., Mem. Can. Soc. C. E., of the Department of Railways and Canals, who has been officially connected with the St. Lawrence canal system of levels, and is intimately informed regarding them: 'It is fair to assume that if Davis had continued his line of levels to Coteau Landing, the difference between the two lines, Rouses' Point to Coteau Landing, would be only .12 feet in a distance of 52 miles.'

The above limit of error $0.016\sqrt{}$ distance in miles between bench marks or that attained by precise methods.

From the above the elevation of the Coteau Landing bench mark would be as follows on the assumption, as before stated, that the difference in height between the Valleyfield bench mark and the Coteau Landing bench mark, is absolutely correct:

Canadian determination	163.32
United States determination	163.44

All the above elevations have been based upon the 'Grist-Mill' bench mark at Green bush, N. Y., at elevation +14.73.

This elevation—correctly 14.728—above mean tide at Governor's Island, N. Y., was determined in 1877 by Mr. O. H. Tittman, United States Coast and Geodetic Survey, and prior to 1903 was used in the determination of the levels of the northern and north-western lakes. (Appendix 8, United States Coast and Geodetic Survey, Report for 1898-9.)

The new determination of the elevation of this bench in 1903 by the Coast and Geodetic Survey of the United States as a permanent standard, and upon which all the elevations of the northern and north-western lakes are now based, has necessarily changed all permanent bench marks depending upon it, that at Rouses' Point being one of them.

This new elevation of the Greenbush 'Grist-Mill' bench has been determined at 13.863.

The Greenbush-Rouses' Point line was run under the direction of Mr. Molitor during 1902; the Rouses' Point-Valleyfield accepted as determined by the late Mr. Davis.

Rouses' Point, 1882. Is at Rouses' Point, Clinton county, N. Y., on the water table on the north side of the Chapman building, 20.6′ west from the N. E. corner, —— is 1.6′ above ground, elevation 32.9031 metres or 107.955 feet.

Bench Mark Valleyfield. Coping of north wall of lock No. 14 Beauharnois canal. Bench mark is on the iron bolt in strap, 6″ from heel post of upper gate. Elevation 47.143 metres or 154.676 feet.

For the above description, and that of the Greenbush 'Grist-Mill' bench mark, see United States Coast and Geodetic Report for 1903, pages 550, 717 and 551.

Summarized from the above and carrying the 1903 determination through to the Coteau Landing bench mark, we have the following:—

Above mean tide, Governor's Island, N.Y.

	American.		Canadian.	
	Old.	New.	Old.	New.
Greenbush	14.73	13.863	14.73	13.863
Rouses' Point	110.06	107.955	110.06	107.955
Valleyfield	156.79	154.676	156.67	154.56
Coteau Landing	136.44	161.32	163.32	161.21

Mr. Chaloner, in his determination of the Coteau Landing bench mark, used the completed lines of precise levels of Public Works Department, connecting Rouses' Point, N. Y., to Sorel, Montreal and Lachine, Que., and ran a line of precise levels connecting Lachine with Coteau Landing, thus closing the loop.

Mr. Chaloner informs me that the elevation of his initial bench mark at Rouses' Point, which is the same bench mark as that referred to above, and known as Rouses' Point '112,' was taken at 107.80 or 0.15 feet lower than the elevation given above.

Raising Mr. Chaloner's elevation of the Coteau Landing bench mark by this amount, we have for its elevation through Sorel, Montreal, Lachine, &c., 161.07 + 0.15 = 161.22, or a difference of only 0.01 feet from the Canadian, and 0.10 feet from the American determination from the same initial bench mark, a most remarkable result considering the distance; or an error of less than 0.007 ✓ distance in miles.

This part of the above circuit, Lachine-Coteau Landing, run by Mr. Chaloner, checks relatively very closely with lines run under the direction of the late Mr. Munro for the Department of Railways and Canals.

	Rys. and Canals.	P. W. D.	
B.M. Rouses' Point, N.Y.	110.06	107.80	
B.M. Coteau Landing, Que.	163.32	161.07	
B.M. Lachine, Que.	96.21	93.94	
or correcting to the U.S.C. & G. elevation		107.95	Rouses' Pt.
B.M. Rouses' Point, N.Y.	107.95	107.95	
B.M. Coteau Landing, Que.	161.21	161.22	
B.M. Lachine, Que.	94.10	94.09	

The Lachine bench mark referred to is: 'Horizontal line on copper plug driven into second lower course of stone, on upper or west face of first pier, north end of C. P. Railway bridge across the St. Lawrence river. Bench mark is marked: C
B ⊖ M

Considering the above, I would recommend that the final elevation of 161.21 be given the Coteau Landing bench mark, and that all the canal levels be reduced to correspond with that elevation.

I would also recommend that a line of precise levels, under the direction of the Department be made to connect the Coteau Landing bench mark and the United States Lake Survey bench marks A and B at Cornwall, Ont., and the U. S. D. W. bench marks A, B, and 4 at St. Regis, Que., for the double purpose of verifying the above, and connecting the lower St. Lawrence level system; the latter allowing of a double check to the present G. B. S. C. levels through Kingston, Toronto, Collingwood and the French river."

CANAL LEVELS.

It is important to note, at once, before giving a description of the lines run with their results, that all the elevations recorded on the survey plans are based on the Coteau Landing bench mark elevation of 161.21 as described above, and on that of the Lachine bench mark of 94.10, all the levels having been reduced to correspond to this elevation.

At the beginning of the survey these determinations seemed to offer all the degree of accuracy required for the purpose of the canal investigation, and they were adopted for convenience and expediency.

The two check lines, however, made subsequently by Mr. Chaloner from Rouses' Point, N. Y., passing by either of these bench marks through different routes gave the following determinations:—

	Lachine B.M.	Coteau B.M.
Via Valleyfield	93.85	160.99
Via St. Johns, Montreal, &c.	93.85	160.98

or a difference of minus 0.25 for the Lachine bench mark.

This difference, however, is reduced to 0.19 at the Vaudreuil bench mark on west abutment of G. T. Railway bridge over the Ottawa river, which was used as an initial point for the Vaudreuil-North Bay line.

Therefore this variation will exist between the bench mark elevations used for the survey and those as published in this report, excepting when otherwise stated.

PRECISE LEVELLING.

DISTANCES IN MILES COVERED AND ROUTES FOLLOWED.

The levelling performed may be divided into four main lines as follows:—

Line No.	Description of Routes.	DISTANCES.		
		Main Lines.	Branch Lines.	Total Distance.
1	Rouses' Point to Cornwall— *Via* St. Johns, Victoria bridge, Lachine, Vaudreuil and Coteau Landing	126·02	20·77	146·79
2	Vaudreuil to North Bay— *Via* Rigaud, Vankleek Hill, Ottawa, Arnprior, Renfrew, Pembroke, and Mattawa	316·23	22·40	338·63
3	Toronto to North Bay— *Via* Newmarket, Barrie, Collingwood, Orillia, Midland, Gravenhurst, Burk's Falls and Nipissing Junction	301·17	9·13	310·30
4	Rouses' Point to Montreal— *Via* Lacolle Junction, Howick Junction, Valleyfield, Coteau Junction and Lachine	84·85	8·64	93·49
	Totals	821.27	60·94	889·21

This levelling was done in 28 different sections: Line No. 1 comprising sections 16, 15, 1 and 14; line No. 2 comprising sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13; line No. 3 embracing sections 17, 18, 19, 20, 21, 22, 23, 24, 25 and line No. 4, sections 27, 26, 28.

A description of these different sections, in their order as made, with description of routes followed and connecting bench marks, is given as follows by Mr. Chas. F. X. Chaloner, the engineer in charge of the levelling party:—

Section No. 1.—Lachine to Coteau Landing

The levelling was started from $B \ominus M \frac{C}{CCCXCIII}$ (Chisel line on end of copper plug, driven horizontally into second course above ground, S.W. face of 1st pier, Lachine end of C.P.R. bridge over St. Lawrence river).

The Lachine road was followed up to the G.T.R. bridge at Ste. Anne de Bellevue; here the Ottawa river was crossed in two different ways: the first, using the locks and west shore of Ottawa river; the second, using the G.T.R. bridge; both crossings closing on $B \ominus M \frac{C}{CCCCXII}$ (Top of copper plug driven vertically into east end of north side of west abutment of G.T.R. bridge over Ottawa river at Ste. Anne de Bellevue).

From $B \ominus M \frac{C}{CCCCXII}$, the G.T.R. was followed to Vaudreuil; from here the post road,

along the west shore of the Ottawa river was made use of, as far as the Cascades; then the road along the north side of the Soulanges canal was followed up to Coteau Landing, closing this section on Bench mark 547 (iron bolt driven horizontally into west end of north face of base of south wall of G.T.R. overhead crossing of road to Coteau du Lac, south side of Soulanges canal).

Section No. 2.—Vaudreuil to St. Eugene.

This section was started from $B \ominus M \frac{C}{CCCCXV}$ (Chisel line on end of copper plug, driven horizontally into west face of top course, south side of west abutment of G.T.R. bridge over Ottawa river).

From Vaudreuil, the C.P.R. was followed up to Rigaud; here a branch line was run along the C.P.R. to Pointe Fortune, closing on $B \ominus M \frac{C}{CCCCXXXVII}$ (Chisel line on copper plug, driven horizontally into base, centre of east face of Pointe Fortune post office and general store, owned by Wm. Brown).

From Rigaud the C.P.R. was followed up to 2.84 miles west of St. Eugene station, closing this section on $B \ominus M \frac{C}{CCCCXLII}$ (Chisel line on end of copper plug, driven horizontally into sixth course from top, south end of west face of large culvert 2.84 miles west of St. Eugene station).

Section No. 3.—The Brook to St. Eugene.

This section was started from $B \ominus M \frac{C}{CCCCXLIII}$ (Chisel line on end of copper plug, driven horizontally into first course above ground, under first window from front, north side of the R.C. church at The Brook).

From The Brook the C.P.R. was followed down to Vankleek Hill, where the C.P.R. crosses the G.T.R. branch line to Hawkesbury; here the G.T.R. was used to reach Hawkesbury, closing on $B \ominus M \frac{C}{CCCCLI}$ (Chisel line on end of copper plug, driven horizontally into first course above ground, about centre of west side of R. C. church at Hawkesbury).

From Vankleek Hill the C.P.R. was again used down to 2.84 miles west of St. Eugene station, closing this section on $B \ominus M \frac{C}{CCCCXLII}$, already described.

Section No. 4.—The Brook to Ottawa.

This section was started from $B \ominus M \frac{C}{CCCCXLIII}$, already described, and run along the C.P.R. up to the Central station, Ottawa; here a branch line was run to the foot of the locks, closing on $B \ominus M \frac{C}{CCCCLVII}$ (Chisel line on end of copper plug driven horizontally into twelfth course from top, northwest outside curved wall, lock 1, foot of Rideau canal).

From the Central station the levelling was crossed over to the west side of the canal and up Albert street to the City Hall, ending this section on $B \ominus M \frac{C}{CCCCLIX}$ (Chisel line on

end of copper plug, driven horizontally into first course above ground, under second window from front, south side of city hall building, Ottawa).

Section No. 5.—Carp to Ottawa.

This section is started from $\frac{C}{CCCCLX}$ B ⊖ M (Chisel line on end of copper plug, driven horizontally into third course from top, north side of east wall of G.T.R. bridge over Carp river, .82 mile west of Carp station).

From Carp the G.T.R. was followed down to near Britannia, the overhead crossing of the C.P.R., at $\frac{C}{CCCCLXI}$ B ⊖ M (top of copper plug, driven vertically into coping, south end of west abutment of G.T.R. overhead crossing of C.P.R., seven miles west of Union station, Ottawa.

From this overhead crossing the C.P.R. was followed to the Union station, Ottawa, at $\frac{C}{CCCCLXVI}$ B ⊖ M (Chisel line on end of copper plug, driven horizontally into third course above pavement, south side of private entrance to Union station, Broad street, Ottawa).

From the Union station the levelling was run along Broad, Ottawa, Sherwood and Lloyd streets and G.T.R. track to Ottawa water works building, at $\frac{C}{CCCCLXVII}$ B ⊖ M (Chisel line on end of copper plug, driven horizontally into second course above platform, west side of first entrance from east end of north face of Ottawa water works pump house).

From the Ottawa water works building a loop line was run, via Duke and Ottawa streets; the Union bridge; Bridge, Main, Albert Victoria, Laurier and Youville streets, Hull; the Alexandra bridge; down the east side of the Rideau canal to lock 1, closing this loop line on $\frac{C}{CCCCLXXIII}$ B ⊖ M (Chisel line on end of copper plug, driven horizontally into top course, shore end of east face of lock No. 1, entrance to Rideau canal).

From the Ottawa water works building, the levelling was run along Queen, Wellington, Bank and Albert streets to city hall building, closing this section on $\frac{C}{CCCCLIX}$ B ⊖ M, already described.

Section No. 6.—Carp to Sand Point.

This section was started from $\frac{C}{CCCCLX}$ B ⊖ M, already described, and run along the G.T.R. up to Arnprior station; then over to C.P.R. station, to $\frac{C}{CCCCLXXVII}$ B ⊖ M (Chisel line on end of copper plug, driven horizontally into first course above pavement, centre of west face of C.P.R. station at Arnprior).

From the C.P.R. station, the C.P.R. was followed up to .36 mile east of Sand Point station, closing this section on bench mark 582 (+ cut into coping, south wall of west end of C.P.R. culvert, .36 mile east of Sand Point station).

Section No. 7.—Haley's to Sand Point.

This section was started from $\frac{C}{CCCCLXXX}$ B ⊖ M (Chisel line on end of copper plug

driven horizontally into second course from top, north end of east face of C.P.R. culvert, 1.22 miles west of Haley station).

From Haley's the C.P.R. was followed down to .36 mile east of Sand Point station, closing this section on bench mark 582, already described.

Section No. 8.—Haley's to Pembroke.

This section was started from $\overset{C}{B \ominus M}_{CCCCLXXX}$, above described, and run along the C.P.R. up to Pembroke station, closing on $\overset{C}{B \ominus M}_{CCCCXCVI}$ (Chisel line on end of copper plug, driven horizontally into first course above pavement, under window, north end of C.P.R. station at Pembroke).

Section No. 9.—Chalk River to Pembroke.

This section was started from $\overset{C}{B \ominus M}_{CCCCXCVII}$ (Chisel line on end of copper plug, driven horizontally into southeast end, inner side, near outer rail from round house, main track of turn table of Chalk River C.P.R. yard).

From Chalk river, the C.P.R. was followed down to 520 feet west of Petawawa station, bench mark 591 ("+" cut into coping, centre of east end of concrete culvert, 520 feet west of Petawawa station.)

From bench mark 591, a branch line was run down to the Ottawa river, closing this line on $\overset{C}{B \ominus M}_{DIV}$ (Chisel line on end of copper plug, driven horizontally into south face of rocky point, some 1,400 feet northwest of Petawawa wharf and about 20 feet from low water mark).

From bench mark 591, the C.P.R. was again followed down to Pembroke station, closing this section on $\overset{C}{B \ominus M}_{CCCCXCVI}$, already described.

Section No. 10.—Chalk River to Mackey's.

This section was started from $\overset{C}{B \ominus M}_{CCCCXCVII}$, already described, and the C.P.R. was followed up to .78 mile west of Mackey station, closing on $\overset{C}{B \ominus M}_{DIX}$ (Chisel line on end of copper plug, driven horizontally into solid rock, close to west rail, 300 feet east of mile 25 from Chalk River and .78 mile west of Mackey's station).

Section No. 11.—Deux Rivieres to Mackey's.

This section was started from $\overset{C}{B \ominus M}_{DX}$ (Chisel line on end of copper plug, driven horizontally into large boulder, 10 feet north of track, 38 feet east of mile post 51, from Chalk River, and .19 mile west of Deux Rivieres station).

From this bench mark a branch line was run 1.90 miles down the Ontario shore of the Ottawa river, foot of Deux Rivieres rapids, closing this branch line on $\overset{C}{B \ominus M}_{DXXIV}$ (Chisel

line on end of copper plug, driven horizontally into solid rock, foot of high cliff, Ontario shore of Ottawa river, some 500 feet below remains of Ranson's old residence, foot of Deux Rivieres rapids.)

From Deux Rivierès the C.P.R. was followed down to .82 mile west of Bissett's station, at $B \ominus \frac{C}{DXVI}$ M (Chisel line on end of copper plug, driven horizontally into solid rock, 15 feet north of track, 36 feet west of mile post 39, from Chalk River, and .82 mile west of Bissett's station.)

From $B \ominus \frac{C}{DXVI}$ M, a braneh line was run along the C.P.R. to main road crossing, .50 mile west of Bissett's station; this main road was followed .75 mile, then a cross road was used down Ontario shore of Ottawa river, closing this braneh line on $B \ominus \frac{C}{DXXV}$ M (Top of eopper plug, driven vertically into solid rock, at water's edge, ferry landing, Ontario shore of Ottawa river, foot of steep hill, leading up to Bissett's station.)

From $B \ominus \frac{C}{DXVI}$ M, the main line was again followed down to .78 mile west of Mackey's station, closing this section on $B \ominus \frac{C}{DIX}$ M, already described.

Section No. 12.—Deux Rivieres to Eau Claire.

This section was started from $B \ominus \frac{C}{DX}$ M, already described, and run along the C.P.R. up to mile post 71 from Chalk River, at $B \ominus \frac{C}{DXXXV}$ M (Chisel line on end of copper plug driven horizontally into east face of immense boulder, east side of C.P.R. traek, touching mile post 71, from Chalk River, and 1.20 miles east of Mattawa station).

From $B \ominus \frac{C}{DXXXV}$ M, a branch line was run down to Ontario shore of Ottawa river, closing this branch line on $B \ominus \frac{C}{DXXXVI}$ M (Chisel line on end of eopper plug, driven horizontally into southwest face of large boulder, 50 feet from water's edge, Ontario shore of Ottawa river, opposite mile post 71 of C.P.R.)

From $B \ominus \frac{C}{DXXXV}$ M, the C.P.R. was again followed up to .16 mile east of Eau Claire station, closing on $B \ominus \frac{C}{DXLIII}$ M (Chisel line on end of copper plug, driven horizontally into solid rock, 3 feet west of siding, 1,280 feet south of mile post 84 from Chalk river, and .16 mile east of Eau Claire station).

Section No. 13.—North Bay to Eau Claire.

This section was started from $B \ominus \frac{C}{DXLIV}$ M (Chisel line on end of eopper plug, driven horizontally into second course from top, west end of north faee of south abutment of C.P.R. bridge over Chippewa creek, .66 mile east of North Bay station).

From B ⊖ M (C DXLIV), the C. P. R. was followed down to .16 mile east of Eau Claire station, closing on B ⊖ M (C DXLIII), already described.

Section No. 14.—Cornwall to Coteau Landing.

This section was started from United States Lake Survey B.M.A. "B ⊕ M" (C A) (Brass bolt driven vertically into coping, .63 foot south of front face wall, 1.9 feet from rear edge of new entrance lock to Cornwall canal).

From B ⊖ M (A), the south side of the Cornwall canal was followed up to the New York & Ottawa Railway bridge, at B ⊖ M (C DLXI) (Chisel line on end of copper plug, driven horizontally into third course above ground, north face of first pier south of Cornwall canal, of New York & Ottawa Railway bridge over St. Lawrence river).

From B ⊖ M (C DLXI), the fields were crossed to reach the New York & Ottawa Railway embankment, and the track was followed up to the G.T.R. junction, at B ⊖ M (C DLXXX) (Chisel line on end of copper plug, driven horizontally into base course, west end of north face of G.T.R. culvert, 350 feet east of New York & Ottawa Railway junction).

From B ⊖ M (C DLXXX), the G.T.R. was followed down to Cornwall station, at B ⊖ M (C DLXII) (Chisel line driven horizontally into base course, between first and second window from east end of rear or south face of Cornwall station).

From B ⊖ M (C DLXII), a branch line was run down Marlborough street to the foot of the Cornwall canal, closing on B ⊖ M (C A), already described.

From B ⊖ M (C DLXII), the G.T.R. was again followed down to Bridge street crossing, .32 mile east of Coteau station.

From Bridge street crossing, a branch line was run to Delisle river, closing this branch line on B ⊖ M (C DLXXIX) (Chisel line on end of copper plug, driven horizontally into second course from top, west face of south abutment of highway bridge over Delisle river, at Bridge street, east end of Coteau Junction village).

From Bridge street crossing, the levelling was run south, along roadway, down to G.T.R. line to Valleyfield; here the G.T.R. to north side of the Soulanges canal, at B ⊖ M (C CCCCXXVIII) (Chisel line on end of copper plug, driven horizontally into base, east face of north abutment of G.T.R. overhead crossing of road along north side of Soulanges canal, at Coteau Landing).

From B ⊖ M (C CCCCXXVII), the levelling was crossed over to the south side of the Soulanges canal, closing on bench mark 547, already described.

Section No. 15.—Lachine to St. Johns.

This section was started from $B \ominus M_{CCCXCIII}^{C}$, on C.P.R. bridge at Lachine, already described.

From $B \ominus M_{CCCXCIII}^{C}$, the C.P.R. was followed to the south side of the Lachine canal; here the C.P.R. embankment was used to get down to the road on the south side of the canal, at $B \ominus M_{DLXXXI}^{C}$ (Chisel line on end of copper plug, driven horizontally into second course above ground, west face of pier, south end of swing bridge over canal).

From $B \ominus M_{DLXXXI}^{C}$, the south side of the Lachine canal was followed down to the G.T.R. bridge over the canal, near St. Henri station, at $B \ominus M_{DLXXXIII}^{C}$ (Chisel line on end of copper plug, driven horizontally into second course from top, west end of north face of south abutment of G.T.R. bridge over Lachine canal at St. Henri).

From $B \ominus M_{DLXXXIII}^{C}$, a branch line was run along the south side of the canal, as far down as the Wellington or Curran bridge, at $B \ominus M_{DC}^{C}$ (Chisel line on end of copper plug, driven horizontally into base, south face, west end of guard wall, south abutment of Curran bridge over canal at Wellington street, Montreal).

From $B \ominus M_{DC}^{C}$, the canal was crossed and the levelling run along Wellington, Brennan, and Commissioner streets to the Examining Warehouse, closing this branch line on $B \ominus M_{O}^{C}$ (Chisel line on end of copper plug, driven horizontally into first stone above plinth, 70 feet from south end, front of the Examining Warehouse, on Commissioner street).

From $B \ominus M_{DC}^{C}$, the G.T.R. was followed to the Victoria bridge, at $B \ominus M_{DLXXXIV}^{C}$ (Chisel line on end of copper plug, driven horizontally into south face of north iron railing, opposite first steel arch, Point St. Charles end of Victoria bridge).

From $B \ominus M_{DLXXXIV}^{C}$, a branch line was run along the bank of Point St. Charles yard, down to the windmill basin, over the basin opposite the G.T.R. elevator, then across to Commissioner street, at McGill street corner; then along Commissioner street down to opposite Jacques Cartier square, then along the harbour to the Longueuil ferry, closing this branch line on $B \ominus M_{L}^{C}$ (Chisel line on end of copper plug, driven horizontally into third course above ground, 4½ feet from Forsyth street, east face of south abutment of C.P.R. overhead crossing of Forsyth street at Longueuil ferry landing).

From $B \ominus M_{DLXXXIV}^{C}$, the G.T.R. was followed across the St. Lawrence river on the Victoria bridge, then along the G.T.R. to the crossing of the C.P.R. at St. Johns, at $B \ominus M_{DXCVI}^{C}$

(Chisel line on end of copper plug, driven horizontally into fourth course from top, centre of north face, east end of south abutment of G.T.R. culvert, 423 feet north of mile post 26 from Montreal, and 95 feet north of G.T.R. crossing of C.P.R. at St. Johns).

From B $\ominus$ $\frac{C}{DXCVI}$ M, a branch line was run along the C.P.R. to the Chambly canal, closing this branch on B $\ominus$ $\frac{C}{DXCVII}$ M (Chisel line on end of copper plug, driven horizontally into fourth course from top, lower end of curved wall, west side of lock 1, entrance to Chambly canal, at St. Johns).

From B $\ominus$ $\frac{C}{DXCVI}$ M, the G.T.R. was again followed, closing this section at St. Johns station on "+" bench mark 633 ("+" cut into granolithic pavement, 1.4 feet from north edge, 1.6 feet from west edge, northwest pointed end of St. Johns station granolithic platform).

Section No. 16.—Rouses' Point to St. Johns.

This section was started from bench mark "$\oplus$" ($\oplus$ cut into stone plinth, 20.6 feet from northeast corner, north face of the Chapman building, intersection of Lake and Chapman streets, Rouses' Point, N. Y.)

From "$\oplus$", Chapman street was followed up to the Delaware & Hudson Railway; here the track was taken and followed to the boundary line between the United States of America and the Dominion of Canada, at bench mark 639 "+" (+ cut on top of boulder, 14 feet west of Delaware & Hudson Railway, 33 feet north of mile post 48 from Montreal, in boundary line between the United States and Canada).

From bench mark 639 "+," a branch line was run along the boundary line, between the United States and Canada, as far as the Richelieu river, closing this branch line on bench well A. (This bench well consists of two distinct cylinders of cast iron, $\frac{1}{2}$ inch to $\frac{3}{4}$ inch thick, and respectively 9 feet long by 9 inches in diameter, and $7\frac{1}{2}$ feet long by $12\frac{1}{2}$ inches in diameter inside; of these one is placed concentrically over the other; the flange ring $2\frac{1}{2}$ inches wide at the foot of the outer tube, resting on a similar flange $3\frac{3}{4}$ inches wide cast on the inner cylinder, 3 feet above its base. The inner cylinder has a flat circular base, 2 feet in diameter and one inch thick, into which is screwed an iron tube 3 inches in diameter and 1 foot high, closed at the upper end by a cylindrical bronze or gun metal cap, with upper edge, chamfered off at an angle of $33\frac{1}{2}°$ to its vertical axis; all the joints being made perfectly water tight. A hemispherical cavity of the ordinary size is turned in the top base of the cap, to be used as a seat for the ball support of the rod to be lowered into the well).

The well is closed by a heavy cast iron cover, screwed on to the outer cover.

As this bench well had been broken open by unknown persons, a larger cover weighing some 500 lbs. was placed over the inner cover.)

From bench mark 639 "+," at the boundary line, the G.T.R. was followed down to .45 mile north of Lacolle Junction, at B $\ominus$ $\frac{C}{DCIII}$ M (Chisel line on end of copper plug, driven horizontally into second course from top, northwest end face of north abutment of G.T.R. bridge over the Lacolle river, .45 mile north of Lacolle Junction).

From B $\ominus$ $\frac{C}{DCIII}$ M, a branch line was run along the railway to the second crossing; from here this cross road was taken to reach the main or post road along the Richelieu river, closing this branch line on B $\ominus$ $\frac{C}{IX}$ M (Chisel line on end of copper plug, driven horizontally into stone foundation, one foot above ground, 2 feet from front, north wall of Louis Gondreau's brick house, west side of main river road to St. Johns and some 600 feet north of cross road 1.14 miles north of Lacolle Junction).

From $B \ominus \frac{C}{DCIII}$ M, the G.T.R. was again followed to Stottsville station, at $B \ominus \frac{C}{DCVI}$ M (Chisel line on end of copper plug, driven horizontally into second course from top, north face, east end of south abutment of G.T.R. culvert, 335 feet north of St. Valentin de Stottsville station).

From $B \ominus \frac{C}{DCVI}$ M, a branch line was run down to St. Paul de l'Isle aux Noix village, closing this branch line on bench well "B," placed inside of fence, opposite front door of St. Paul de l'Isle aux Noix hotel).

From $B \ominus \frac{C}{DCVI}$ M, the G.T.R. was again followed to Grande Ligne station, at $B \ominus \frac{C}{DCVIII}$ M (Chisel line on end of copper plug, driven horizontally into third course above ground, 3 feet from northwest corner, north face of St. Blaise de Grande Ligne station).

From $B \ominus \frac{C}{DCVIII}$ M, a branch line was run down the Grande Ligne road to the main or post road, at $B \ominus \frac{C}{VI}$ M (Chisel line on end of copper plug, driven horizontally into first course above ground, 11 feet from front, west side of Marsolin Robert's large brick house, at junction of Grande Ligne and Richelieu river roads).

From $B \ominus \frac{C}{VI}$ M, the post or Richelieu river road was followed for 5.84 miles, closing this branch line on $B \ominus \frac{C}{IV}$ M (Chisel line on end of copper plug, driven horizontally into first stone above ground, 6 inches from front, north wall of François Pinsonneault's large stone house on west side of post road, $1\frac{1}{2}$ miles south of St. Johns G.T.R. station)

From $B \ominus \frac{C}{DCVIII}$ M, the G.T.R. was again followed down to the G.T.R. water tank at $B \ominus \frac{C}{DCXII}$ M (Chisel line on end of copper plug, driven horizontally into north face of stone base of wooden support of G.T.R. water tank at St. Johns).

From $B \ominus \frac{C}{DCXII}$ M, a branch line was run over to the military grounds, closing this branch on bench well "C," placed some 300 feet east of north main entrance to yard of St. Johns military school).

From $B \ominus \frac{C}{DCXII}$ M, another branch line was run along Champlain street down to lock 1, closing this branch line on $B \ominus \frac{C}{I}$ M (Chisel line on end of copper plug, driven horizontally into stone foundation, northeast corner of T. Nolin's small brick cottage, opposite lock 1, entrance to Chambly canal, at St. Johns).

From $B \ominus \frac{C}{DCXII}$ M, this section was closed on bench mark 633 "+," on St. Johns G.T.R. station platform, already described.

Section No. 17.—Toronto to Newmarket.

This section was started from B ⊖ M (Chisel line on end of copper plug, driven horizontally into first course above ground, 24 feet from south corner, east of James street face of Toronto city hall building).

From B ⊖ M, the levelling was run along James, Albert, University, Queen and Simcoe streets, to the Union station, at B ⊖ M (Chisel line on end of copper plug, driven horizontally into base of buttress, west face of southwest corner of south building of Union station at Toronto).

From B ⊖ M, the G.T.R. was followed to Bathurst street bridge, at B ⊖ M (Chisel line on end of copper plug, driven horizontally into first course above ground, east end of south face of north abutment of iron bridge over railway tracks, foot of Bathurst street).

From B ⊖ M, a branch line was run down to the lake shore, closing this branch on bench mark 647 ("+" cut into coping, southwest corner of large arched portal of Garrison creek sewer, some 800 feet north of west end of Queen's wharf, Toronto bay).

From B ⊖ M, the G.T.R. was then followed to Strachan avenue crossing; here a branch line was run up to Queen street, and into Trinity college grounds, closing this branch on B ⊖ M (Chisel line on end of copper plug, driven horizontally into dressed stone base, 31.8 feet from rear end, west face of Trinity college, Toronto).

From Strachan avenue crossing, the G.T.R. was followed to Toronto Junction at B ⊖ M (Chisel line in end of copper plug, driven horizontally into north face of stone pier, under east column of iron trestle, supporting south end of bridge over C.P.R. tracks at Weston road, west end of C.P.R. station at Toronto Junction).

From Toronto Junction, the C.P.R. was followed to the crossing of the G.T.R. line to North Bay, at bench mark 652 ("+" cut into coping, on east end of south wall of C.P.R. culvert, 18 feet W. of G.T.R. line to North Bay).

From bench mark 652, a branch line was run along the C.P.R. to North Toronto station at B ⊖ M (Chisel line on end of copper plug, driven horizontally into base, under centre window, east wall of C.P.R. station at North Toronto).

From North Toronto, the levelling was run along the C.P.R. to Yonge street; then down Yonge street, Marlborough avenue, Avenue road and street; then through Queen's Park to B ⊖ M (Chisel line on end of copper plug, driven horizontally into base, 1.6 feet south of second basement window from north end of Toronto University Biological Department building, Queen's Park).

From B ⊖ M, the levelling was continued down University, Albert and James streets,

C
closing this branch line on B ⊖ M, on city hall building, already described.
DCXIII

From bench mark 652 "+," the G.T.R. line to North Bay, was followed up to New-
C
market, closing this section on B ⊖ M (Chisel line on end of copper plug, driven
DCXXXIX
horizontally into second course from top, south end of east face of north abutment of G.T.R. bridge over Holland river, north of Timothy street crossing, Newmarket).

Section No. 18.—Barrie to Newmarket.

C
This section was started from B ⊖ M (Chisel line on end of copper plug, driven
DCXL
horizontally into stone foundation, 1.8 feet above ground, and 5.45 feet east of west end door, south or rear wall of post office at Barrie).

C
From B ⊖ M, the G.T.R. was followed down to the Holland river crossing, at New-
DCXL
C
market, closing this section on B ⊖ M, already described.
DCXXXIX

Section No. 19.—Barrie to Collingwood.

C
This section was started from B ⊖ M, above described; and run along Dunlop
DCXL
street, Elizabeth road and first concession road to G.T.R. line to Meaford; here the G.T.R.
C
was followed to Collingwood at B ⊖ M (Chisel line on end of copper plug, driven
DCLXVIII
horizontally into foundation under window, south side of main entrance to G.T.R. station at Collingwood).

C
From B ⊖ M, the levelling was run through the Collingwood ship yard,
DCLXVIII C
closing this section on B ⊖ M (Chisel line on end of copper plug, driven horizontally
DCLXIX
into first course above ground, east corner of face of Collingwood Ship Building Company's pump house).

Section No. 20.—Barrie to Longford.

C
This section was started from B ⊖ M, already described, and run along the G.T.R.
DCXL C
to Longford, closing this section on B ⊖ M (Chisel line on end of copper
DCLXXXVII
plug, driven horizontally into base, north end of west face of solid rock, 60 feet west of main track and opposite mile post 93-133, north side Longford station crossing).

Section No. 21.—Orillia to Midland.

This section was started from bench mark 672 (brass-headed nail driven vertically into second altar step from top, north end of east wall of wooden culvert, 563 feet east of Orillia station).

From bench mark 672, the G.T.R. was followed to Midland, closing this section on B $\ominus^{\frac{C}{DCC}}$ M (Chisel line on end of copper plug, driven horizontally into stone foundation, 1.2 feet above pavement, under space between 4th and 5th first floor windows from front, Bay street wall of Queen's hotel, Midland).

Section No. 22.—Falkenburg to Longford.

This section was started from B $\ominus^{\frac{C}{DCCI}}$ M (Top of copper plug, driven vertically into bed rock, 21 feet west of track, 213 feet south of mile post 127–100 and .18 mile north of G.T.R. station at Falkenburg).

From B $\ominus^{\frac{C}{DCCI}}$ M, the G.T.R. was followed to Gravenhurst at B $\ominus^{\frac{C}{DCCXI}}$ M (Chisel line on end of copper plug, driven horizontally into west face of solid rock, 36.4 feet east of main track and 360 feet north of north semaphore of G.T.R. station at Gravenhurst).

From B $\ominus^{\frac{C}{DCCXI}}$ M, a branch line was run down the G.T.R. to Muskoka lake, closing this branch line on B $\ominus^{\frac{C}{DCCXII}}$ M (Top of copper plug, driven vertically into solid rock, 225 feet west of end of Muskoka wharf, between wharf of Mickle, Dyment & Company and boat house).

From B $\ominus^{\frac{C}{DCCXI}}$ M, the G.T.R. was then followed down Longford station, closing this section on B $\ominus^{\frac{C}{DCLXXXVII}}$ M, already described.

Section No. 23.—Falkenburg to Scotia Junction.

This section was started from B $\ominus^{\frac{C}{DCCI}}$ M, already described, and run up to .08 mile south of Scotia Junction, closing this section on B $\ominus^{\frac{C}{DCCXLVII}}$ M (Chisel line on end of copper plug, driven horizontally into solid rock, 14 feet east of track and .08 mile south of Scotia Junction).

Section No. 24.—South River to Scotia Junction.

This section was started 2.08 miles north of South River station, on B $\ominus^{\frac{C}{DCCXLVIII}}$ M (Chisel line on end of copper plug, driven horizontally into solid rock, 10.8 feet east of track, and 51.4 feet south of mile post 36–191).

From B $\ominus^{\frac{C}{DCCXLVIII}}$ M, the G.T.R. was followed down to .78 mile north of Burk's Falls station at B $\ominus^{\frac{C}{DCCLXII}}$ M (Chisel line on end of copper plug, driven horizontally into sixth course from top, west face of north abutment of G.T.R. bridge over north branch of Magnetawan river, .78 mile north of G.T.R. station at Burk's Falls).

From B $\ominus^{\frac{C}{DCCLXII}}$ M, a branch line was run down the G.T.R. to the Magnetawan wharf, closing this branch line on bench mark 718 ("+," cut into bed rock, 34 feet south of track, and 39.2 feet east of cast end of Magnetawan wharf, Burk's Falls).

From B $\ominus^{\frac{C}{DCCLXII}}$ M, the G.T.R. was followed down to .08 mile south of Scotia Junction, closing this section on B $\ominus^{\frac{C}{DCCXLVII}}$ M, already described.

Section No. 25.—South River to North Bay.

This section was started from B $\ominus^{C}$ M, already described, and run along the G.T.R. to Nipissing Junction, at B $\ominus^{\frac{C}{DCCXCV}}$ M (Chisel line on end of copper plug, driven horizontally into solid cliff rock, 10.4 feet southwest of track, and 50 feet north of junction of G.T.R. with C.P.R. at Nipissing Junction).

From B $\ominus^{C}$ M, the C.P.R. was then run to North Bay station, closing this section on B $\ominus^{\frac{C}{DCCXCVI}}$ M (Chisel line on end of copper plug, driven horizontally into base, centre of southeast face of C.P.R. station at North Bay).

Section No. 26.—Coteau Junction to Aubrey.

This section was started from B $\ominus^{C}$ M, already described, and run along Bridge street to the crossing of the G.T.R. branch line to Valleyfield; here the G.T.R. was used to the Soulanges canal at B $\ominus^{\frac{C}{DCCXCVII}}$ M (Chisel line in end of copper plug, driven horizontally into top course, north face of up stream end of north abutment of G.T.R. swing bridge over Soulanges canal, at Coteau Landing)'.

From B $\ominus^{C}$ M, a branch line was run down to bench mark 547, already described.

From B $\ominus^{C}$ M, the G.T.R. was followed to Valleyfield station; from here a branch line was run to the Beauharnois canal, closing this branch on B $\ominus^{\frac{C}{DCCCV}}$ M (Chisel line on end of copper plug, driven horizontally into foundation, one foot above ground, and 29 feet from front north gable end of Larocque House, Valleyfield).

From Valleyfield station, the G.T.R. was followed to the crossing of the canal, at bench mark 730 ("+" cut on coping down stream side of south abutment of G.T.R. bridge over Beauharnois canal).

From bench mark 730, a branch line was run along the north side of the canal up to lock 14, at bench mark 729 ("+" cut on strap, 6 inches from heel post, north end of upper gates of lock 14, Beauharnois canal).

From bench mark 730, the G.T.R. was followed to Aubrey, closing this section on
C
B ⊖ M (Chisel line on copper plug, driven horizontally into second course from top,
DCCCXVIII
west end of south face of small culvert 2,570 feet west of mile post 34, and 2.12 miles west of Aubrey station).

Section No. 27.—Rouses' Point to Aubrey.

This section was started from bench mark ⊕, on the Chapman building, and run up Chapman street to Delaware & Hudson tracks; along Delaware & Hudson Railway to boundary line between the United States and Canada; a branch line was run along the boundary line to bench well, near Richelieu river; from the boundary line the Delaware & Hudson Railway or G.T.R. was followed to Lacolle Junction, at bench mark 737 ("+" cut into second altar step, east end of south ballast wall of small culvert, 210 feet north of semaphore south of G.T.R. branch line to Ottawa, Lacolle Junction).

From bench mark 737, the G.T.R. branch to Ottawa was followed up to the cross road to the R. C. church; here a branch line was run up to the church, clos-
C
ing this branch line on B ⊖ M (Chisel line on end of copper plug, driven horizontally
DCCCXXIII
into stone foundation, one foot above ground, 61.9 feet from front and 38.3 feet from rear end of Ste. Claude de Lacolle R. C. church).

From cross road to Ste. Claude R. C. church, the G.T.R. was followed to
C
2.12 miles west of Aubrey station, closing this section on B ⊖ M, already described.
DCCCXVIII

Section No. 28 Lachine to Coteau Junction.

C
This section was started from B ⊖ M, on Lachine end of C.P.R. bridge, already
CCCXCIII
described, and run along the C.P.R. to the swing bridge over the canal, at bench mark 743 ("+" cut on coping, south end of west side of abutment of C.P.R. swing bridge over Lachine canal). C

From bench mark 743, a branch line was run down the C.P.R. embankment to B ⊖ M, already described. DLXXXI

From bench mark 743, the C.P.R. was followed to the overhead crossing of the G.T.R.;
C
here the levelling was run from the C.P.R. embankment to the G.T.R. at B ⊖ M (Chisel
DCCCXXXIX
line on end of copper plug, driven horizontally into second course above ground, 9 feet from west end of north face of south abutment of C.P.R. overhead crossing of G.T.R., .11 mile west of G.T.R. station at Rockfield, Lachine).

C C
From B ⊖ M, the G.T.R. was followed to Mountain street crossing, at B ⊖ M
DCCCXXXIX DCCCXLVII
(Chisel line on end of copper plug, driven horizontally into second course above ground, 6.6 feet from west end of north face of G.T.R. freight shed nearest to tracks, at Mountain street crossing, Bonaventure station, Montreal).

C
From B ⊖ M, the levelling was run along Mountain, McCord and Wellington streets
DCCCXLVII C
to the Curran bridge, closing this branch line on B ⊖ M, on south side of Curran bridge
DC
over Lachine canal at Wellington street, Montreal, already described.

From B $\ominus$ M, near Rockfield station, the G.T.R. was followed up to opposite the Lachine wharf, at B $\ominus$ M (Chisel line on end of copper plug, driven horizontally into second course from top, under north rail, east face of ballast wall of G.T.R. culvert, 1,820 feet east of mile post 8, Lachine).

From B $\ominus$ M, a branch line was run to the Lachine wharf, closing this branch line on B $\ominus$ M (Chisel line on end of copper plug, driven horizontally into first cut stone above ground, southeast corner of double stone house, second west of 34th avenue, along Lachine road, west of wharf, Lachine).

From B $\ominus$ M, the G.T.R. was followed to Dorval station; here a branch line was run down to the R. C. church, closing this branch line on B $\ominus$ M (Chisel line on end of copper plug, driven horizontally into first cut stone above ground, one foot from rear end, west wall of Dorval R. C. church).

From Dorval, the G.T.R. was followed up to Bridge street, .32 mile east of Coteau station; here Bridge street was followed to the highway bridge over Delisle river, closing this last section on B $\ominus$ M (Chisel line on end of copper plug, driven horizontally into second course from top, west face of south abutment of highway bridge over Delisle river at east end of Coteau Junction village).

ACCURACY OF RESULTS.

The accuracy of the main line of levels from Rouses' Point to North Bay, upon which depended all other subsidiary level lines in connection with the survey, was of supreme importance.

This has been proven to be substantially correct, within all reasonable limits of errors for long level lines, by a check line from Toronto to North Bay and water level transfers from (the self) registering United States gauging stations at Tibbett's Point, N.Y., on Lake Ontario to a similar station established at Toronto, and also by further water level transfers from Mackinaw City and Harbour Beach Lake Huron gauging stations, to Collingwood and French River Harbour, thence by level line through the French river to North Bay (Chippewa bench mark).

The "Chippewa" bench mark at North Bay was therefore the objective point of three different lines of levels, all having for base the United States Coast and Geodetic and Lake Survey system, the different points of which have been determined in elevation above mean sea level as close as it is possible to do it in long distance precise level work.

The approximate length of these different lines is:—

Rouses' Point to North Bay	= 482	miles.
Toronto to North Bay	= 227	"
French River Harbour to North Bay	= 80	"

The resulting elevations are given in detail further in this report, and it will be noted that the difference in elevation of the "Chippewa" bench mark, at North Bay, by the different lines, varies from 0.85 to a little over a foot, difference which it has been possible to adjust satisfactorily by means of the many checks obtained.

Various limits of precision have been fixed in regard to the final error of a series of observations by different precise levelling surveys.

The United States Coast and Geodetic Survey calls for a precision in feet equivalent to 0.02 feet $\surd$ distance in miles.

The United States Geological Survey has fixed the same limit, and the United States, Mississippi and Missouri River Commission that represented by the formula 0.0126 feet $\sqrt{2} \times$ distance in miles, for direct lines.

But it has been recognized that a limit of error based on these formulæ, while found satisfactory for short lines, often proves too severe for long lines, and it is generally impossible to maintain it for such a great distance as involved in the levelling under consideration.

The British Ordnance Survey limit of 0.01 feet per mile and that used by the United States Lake Survey of 0.041 $\surd$ distance in miles would seem to more fairly apply to the present case and the resulting error is well within these limits.

The European International Geodetic Association consider as fair a limit of probable error of 0.0085 feet per mile, while if the error is reduced to half of this figure (0.0042 feet per mile) it is considered that a very high degree of precision has been obtained.

Taking the Rouses' Point, Valleyfield, North Bay, Toronto line, a distance of about 710 miles of actual levelling, the above high degree of precision is more than obtained: 710 x 0.0042 = 2.98 feet, the highest discrepancy found being very little over 1 foot.

RESULTS, COMPARISONS AND ADJUSTMENTS.

In the following pages, the results of the different lines of precise level and water level transfer are given and compared, adjustments required deduced and condensed data regarding water level transfers given.

Datum.—Mean sea level, Atlantic Ocean, New York City.

Initial Bench Mark.—B.M. $\oplus$ Chapman building, Rouses' Point, New York State. Elevation above mean sea level, 107.955.

From this initial bench mark, the levelling was run to Coteau Landing by two different routes as previously described:—

Length of 1st route, 90 miles; length of 2nd route, 50 miles. These two lines were joined at bench mark 547. (Iron bolt driven horizontally into southwest corner of north face of south abutment of G.T.R. overhead crossing of road along south side of Soulanges canal).

Elevation of B.M. 547 via 1st route	160.98	feet.
Elevation of B.M. 547 via 2nd route	160.99	"
Mean	160.985	"
Elevation of B.M. 547 via U.S.D.W. Engineers route to Valleyfield and C.D.W. Engineers to Coteau Landing	161.320	"
Difference	.335	"

The first route as a check was continued up to Cornwall and tied in on U.S.L.S. bench mark A (brass bolt in coping .63 feet south of front face wall and 1.9 feet from rear edge of new entrance lock to Cornwall canal).

U.S.L.S. B $\ominus$ C A M—Via U.S. Engineers	167.031	feet.
" Georgian Bay Canal Survey	166.730	"
Difference	.301	

If we refer all these determinations to bench mark 547 we have the following elevations:—

Via Rouses' Point to Coteau, via St. Lambert	160.98	feet.
" Rouses' Point to Coteau, via Valleyfield	160.99	"
" $\frac{C}{A}$ B ⊖ M at Cornwall to Coteau, via G.T.Ry	161.28	"
" U.S.D.W. and C.D.W. Engineers	161.32	"
Mean of 1st and 2nd results	160.985	"
Mean of 3rd and 4th results	161.300	"
Difference	.315	"
Probable correct elevation of B.M. 547	= 161.30	"
1st route elevation of B.M. 547	= 160.98	"
Difference	.32	"

.32 feet in 90 miles = .0035 feet per mile to be added to instrumental determinations from initial point at Rouses' Point through 1st route.

The correction for the 2nd route, 50 miles long, is similarly found to be .0062 feet per mile.

VAUDREUIL TO NORTH BAY.

The initial bench mark for this line is $\frac{C}{B}$ ⊖ M–CCCCXV (Chisel line on end of copper plug, driven horizontally into west face of top course, south end of west abutment of G.T.R. bridge over Ottawa river at Vaudreuil).

Elevation, via Rouses' Point, St. Lambert to Vaudreuil	88.24	feet
Add correction for 77 miles at .0035 feet per mile	+.27	"
Corrected elevation	88.51	"
Elevation, via Rouses' Point, Valleyfield to Vaudreuil	88.30	"
Add correction for 66 miles at .0062 feet per mile	+.41	"
Corrected elevation	88.71	"
Mean of two routes	88.61	"

This line terminates on $\frac{C}{B}$ ⊖ M–DXLIV (Chisel line on end of copper plug, driven horizontally into second course from top, west end of north face of south abutment of C.P.R. bridge over Chippewa creek, North Bay).

Elevation, via Rouses' Point, Vaudreuil to North Bay (as per mean of St. Lambert and Valleyfield routes as corrected to Vaudreuil)	649.99	feet.
Elevation, via water transfer from Tibbett's Point, N.Y., to Toronto and Georgian Bay Canal levelling to North Bay along G.T.R.	650.71	"
Difference	.72	"
Probable correct elevation of $\frac{C}{B}$ ⊖ M–DXLIV	650.71	"

Distance from Vaudreuil to North Bay 316 miles .72 feet in 316 miles = .00228 feet per mile to be added for adjusted elevations between B.M.–CCCCXV and B.M.–DLXIV.

The determination of this elevation for the terminal bench mark at North Bay was done through water level transfer from Tibbett's Point, across Lake Ontario to Toronto and thence by levelling to North Bay.

It was desirable that the long line run from Vaudreuil to North Bay be conclusively checked and herein below condensed data and results of this check are given.

WATER LEVEL TRANSFERS, LAKE ONTARIO.

Simultaneous Gaugings.

Tibbett's Point, N.Y.				Toronto, Ont.			
Month	No. of days.	Monthly mean elevation.	Weighted mean elevation.	Month.	No. of days.	Monthly mean elevation.	Weighted mean elevation.
1906.				1906.			
				June	26	3·114	80·964
July	31	246·40	7638·40	July	31	3·281	101·711
August	31	246·14	7630·34	August	31	3·055	94·705
September	30	245·77	7373·10	September	25	2·965	74·125
October	29	245·66	7124·14	October	28	2·811	78·708
November	30	245·55	7366·50	November	19	2·771	52·648
Arithmetical mean elevation		245·904		Arithmetical mean elevation		2·9996	
Weighted mean elevation		245·91		Weighted mean elevation		3·018	
				Zero of gauge — 3·018 below W.S.			
				Zero of gauge to B. M. 646½ + 11·475.			

Weighted mean elevation of Lake Ontario = 245.9105 above M.S.L. New York

Weighted mean elevation of Lake Ontario to zero of automatic gauge =	3.0180
Zero of Toronto gauge =	242.8925
Zero of automatic gauge up to B.M. 646½ =	+11.4750
B.M. 646½ =	254.3675
B.M. 646½ to zero of Toronto Harbour Commission gauge =	—9.3490
Zero of Toronto Harbour Commission gauge on Victoria pier =	245.0185

Bench mark 646½ referred to is top of spike, level with coping southeast corner of Garrison sewer portal, about 800 feet northwest of Victoria pier, Toronto harbour.

From Toronto the levelling was run along the G.T.R. to North Bay, joining the levelling from Rouses' Point, at $B \overset{C}{\ominus}$ M-DXLIV.

LAKE HURON.—WATER TRANSFERS.

Water level transfers were made from Mackinaw City and Harbour Beach automatic permanent gauges to Collingwood and French River on Georgian Bay in order to establish a check on level lines to these points.

Harbor Beach.			Mackinaw City.			Collingwood.		
Month.	No. of days.	Monthly mean elevation.	Month.	No. of days.	Monthly mean elevation.	Month.	No. of days.	Monthly mean elevation.
1906.			1906.			1906.		
						May.....	15	·963
						June.....	30	·861
July.....	31	581·45	July.....	31	581·51	July.....	31	·743
August.....	31	581·36	August.....	30	581·38	August.....	31	·869
September.....	30	581·12	September....	21	581·08	September....	30	1·033
October.....	31	580·87	October.....	27	580·85	October.....	31	1·307
November.....	30	580·68	November....	30	580·72	November....	27	1·479
Weighted mean elevation...581·098			Weighted mean elevation.....581.118			Weighted mean readings..... 1·0340		

Weighted mean elevation of Lake Huron..... 581.108 feet.
Weighted mean elevation to zero of Collingwood automatic gauge..... +1.034 "

Zero of Collingwood automatic gauge, via water transfer 582.142 "
Zero of Collingwood automatic gauge to B.M. 668½..... +5.66 "

B.M. 668½..... = 587.80 "

Bench mark 668½ is top of iron spike driven vertically into top of plinth, northeast corner of Collingwood Ship Building Co's pump house, Collingwood.

The comparison of results at Collingwood are as follows:—

Elevation of B.M. 668½, via water transfer from Tibbett's Point, N.Y., to Toronto and precise level line to Collingwood..... 587.40 feet.
Elevation of B.M. 668½, via water transfer from Harbor Beach and Mackinaw City, Mich..... 587.80 "

Difference..... .40 "

The *probable* correct elevation of B.M. 668½ being taken at 587.80 feet and the distance from Toronto to Collingwood being 92 miles, the correction to be made is .00435 feet per mile, to be added up to Collingwood to the instrumental elevations.

SIMULTANEOUS HOURLY GAUGINGS AT COLLINGWOOD, WAUBAUSHENE AND HARBOR BEACH, JANUARY 5–17, 1906.

Mean of 108 *Readings.*

Collingwood..... 580.18 feet above mean sea level.
Wabaushene..... 580.16 " " "
Harbor Beach..... 580.54 " " "
Difference between Collingwood and Waubaushene..... = .02 feet.
Correction from Toronto to Collingwood as above..... = .40 "

Correction from Toronto to Waubaushene..... = .42 "

From Toronto to Waubaushene, 101 miles. .42 feet in 101 miles = .0041 feet per mile, to be added to obtain adjusted elevations.

SIMULTANEOUS HOURLY GAUGINGS AT COLLINGWOOD, MIDLAND AND HARBOR BEACH. SEPTEMBER 5–18, 1906.

Mean of 149 *Readings.*

Collingwood	580.80	feet above mean sea level.
Midland	580.62	" " "
Harbor Beach	581.13	" " "
Difference between Collingwood and Midland	.18	feet.
Differenee between Collingwood and Waubaushene	.02	"
Differenee between Waubaushene and Midland	.16	"

From Waubaushene to Midland, 13 miles. .16 feet in 13 miles = .0123 feet per mile to be added to obtain adjusted elevations.

ORILLIA TO NORTH BAY.

From Toronto to Orillia is 80 miles. 80 miles at .00435 feet per mile = .35 feet.

Elevation of $B \ominus^{C}$ M–DXLIV at North Bay, via water transfer from Tibbett's Point, N.Y., to Toronto and precise level line as corrected up to Orillia	651.06	feet.
Probable correct elevation of $B \ominus^{C}$ M–DXLIV	650.71	feet.
Difference	.35	"

From Orillia to North Bay, 140 miles. .35 feet in 140 miles = .0025 feet per mile to be deducted to obtain adjusted elevations.

WATER TRANSFERS, LAKE HURON.

Determinations referring to French River on Georgian Bay.

Harbor Beach.			Mackinaw City.			French River.		
Month.	No. of days.	Monthly mean elevation.	Month.	No. of days.	Monthly mean elevation.	Month.	No. of days.	Monthly. mean readings.
1906.			1906.			1906.		
July	31	581·45	July	31	581·51			
August	31	581·36	August	30	581·38			
September	30	581·12	September	21	581·03	September	30	1·302
October	31	580·87	October	27	580·85	October	27	1·063
November	30	580·68	November	30	580·72	November	17	·631
Weighted mean elevation		581·098	Weighted mean elevation		581·118	Weighted mean readings		1·0606

Zero of French River gauge = 1.0606 below water surface.

Zero of gauge to B ⊖ M 26 on ring bolt 125 feet south of Ontario Lumber Company's wharf at French River village	+11.770	
B.M. 26 to B.M.–DXLIV, "Chippewa creek", North Bay	+59.2352	
Weighted mean elevation of Lake Huron	581.1080	feet.
Weighted mean readings to zero of French River automatic gauge	—1.0606	"
Zero of French River automatic gauge, via water level transfer	580.0476	"
Zero of French River gauge via precise level from Toronto	579.7048	"
Difference	.3428	"

The difference of .3428 is reduced to .10 if we eliminate the readings at French river for the month of November, which seem to have been erratic as compared with gaugings at Harbor Beach and Mackinaw City for the same month, due probably to local weather conditions.

On this basis the following deductions are made:—

Mean elevation of Lake Huron, September and October	580.98	feet.
Mean elevation of Lake Huron to zero of French River gauge	—1.18	feet.
Zero of French River automatic gauge via water transfer	579.80	"
Zero of gauge to B.M. 26, French River	+11.77	"
Elevation of B.M. 26	591.57	"
B.M. 26 to B.M.–DXLIV, Chippewa creek, North Bay	59.24	"
B.M.–DXLIV via water transfer	650.81	"
B.M.–DXLIV via precise level from Toronto and Tibbett's Point	650.71	"
B.M.–DXLIV via Rouses' Point and Vaudreuil, instrumental	649.66	"
B.M.–DXLIV via Rouses' Point and Vaudreuil, adjusted	650.71	"

CHECKING OF PRECISE LEVELS BY WATER LEVEL TRANSFERS.

As mentioned at the beginning of this report the placing and maintenance of automatic continuous gauges in reference to necessary water transfers for proper checks on the level lines was under the immediate direction of Mr. S. J. Chapleau, District Engineer for the Nippissing and western end of the canal survey.

Extracts of his report in this connection, with some deductions made, are given below:—

"The projected level system of the Georgian Bay Ship Canal Survey is referred to the same datum as the United States Coast and Geodetic, and the Lake Survey precise level systems for reasons that are obvious.

"The main line of levels of the Georgian Bay Ship Canal Survey start from Rouses' Point, N.Y., bench mark 1881, Chapman building, and determine by different lines the elevation of B.M.–CCCXCIII at Lachine, upon which the elevations of the bench marks along the route of the proposed canal as far as North Bay depend and terminates in B.M.–DXLIV on abutment of a bridge over Chippewa creek, referred to hereafter as "Chippewa."

From the above bench mark the levels were carried by a special party attached to section No. 1 across Lake Nipissing and down the Pickerel and French rivers, terminating in a bench mark at French River village on Georgian Bay. In addition to the above the terminal

B.Ms. 646½ on the portal of the Garrison street sewer, Toronto harbour, and 668½ on the pump house of the Ship Building Company, Collingwood, were connected by precise level with the "Chippewa" bench.

'In order to establish a check on the "Chippewa" and French river bench marks, "Haskell" automatic recording gauges were established at French River village, Collingwood and Toronto, by which water level transfers were obtained with Mackinaw City and Harbor Beach, Mich., for Lake Huron, and with Tibbett's Point, N.Y., for Lake Ontario.' The Rouses' Point bench and the bench marks upon which the zeros of the United States Lake Survey automatic gauges at Tibbett's Point, N.Y., Harbor Beach and Mackinaw City Mich., depend, are all embraced in the 1903 adjustment of the United States precise level net.

'The records of the United States automatic gauges were kindly supplied by Col. G. J. Lydecker, United States Corps of Engineers, in charge of the United States Lake Survey, stationed at Detroit.

The gauges were run as follows:—

Location.	From	To	Number of days.
French River	September 1.	November 17.	74
Collingwood	May 15.	" 27.	196
Toronto	July 1.	" 16.	139
Mackinaw City	July 1.	" 30.	153
Sand Beach	July 1.	" 30.	153
Tibbett's Point	July 1.	" 16.	139

'The method of reduction was as follows:—The gauge sheets show a continuous profile of water surface during the time run, from which 24 hourly readings are obtained between it and the zero line by scale, and the arithmetical mean of the day obtained. The daily means give an arithmetical monthly or period mean, which, with the number of days in each period, yield a weighted mean by method of least squares for the entire time of observation. In deriving the final means given below, the mean for each month has been assigned a weight proportional to the number of days during which observations were taken, weighted mean being: $Xo = \frac{\Sigma P}{\Sigma P}$ (Pn). The difference in elevation between the zero of gauge and adjacent bench mark being checked by "Y" level from time to time during season of running of gauge.

'On comparing the gauge records by days, it was found that breaks occurred during different days at each station; in compiling the results only those days having corresponding dates at the two points being compared, were considered. The prefixes + or — to the weighted means of the gauge readings indicate the position of the zero, above or below the water surface.

WATER LEVEL TRANSFERS.

Lake Ontario.

Tibbett's Point, N.Y.—Mean Lake plane elevation, for July, 31 days; August, 31 days; September, 25 days; October, 25 days and November, 16 days 245.964

Toronto, Ont.—Mean gauge readings for same period ..... —3.012

Lake Huron and the Georgian Bay.

Harbor Beach, Mich.—Mean Lake plane elevation for July, 31 days; August, 31 days; September, 30 days; October, 30 days, and November, 26 days..... 581.170
Collingwood, Ont.—Mean gauge readings for same period..... +1.073
Mackinaw City, Mich.—Mean Lake plane elevation for July, 31 days; August, 30 days; September, 24 days; October, 29 days, and November, 26 days..... 581.123
Collingwood, Ont.—Mean gauge readings for same period..... +1.078
Harbor Beach, Mich.—Mean Lake plane elevation for September, 30 days; October, 26 days, and November, 14 days.... 580.942
French River, Ont.—Mean gauge readings for same period.... —1.083
Mackinaw City, Mich.—Mean Lake plane elevation for September, 24 days; October, 24 days, and November, 14 days.... 580.911
French River, Ont.—Mean gauge readings for same period.... —1.050
Collingwood, Ont.—Mean gauge readings for September, 30 days; October, 26 days, and November, 14 days..... +1.224
French River, Ont.—For same period..... —1.083

GAUGE REFERENCE B.MS

Toronto,	No. 646½.....	11.475	above	zero	of gauge.
Collingwood,	" 668½.....	5.66	"	"	"
French River,	French 26.....	11.77	"	"	"

From the above data, together with the results of the precise line connecting the Toronto and Collingwood terminal benches, and the section No. 1 special determination of the difference in elevation between the terminal benches at French River and North Bay, we are able to effect the following summaries:—

Definition.	Elevation.
Toronto, zero of gauge (from Tibbett's Point).....	242.952
Toronto, B.M. 646½.....	254.427
B.M. 668½, Collingwood above B.M. 646½ (precise line).....	333.05
Collingwood B.M. 668½.....	587.477
Collingwood, zero of guage.....	581.817
French River, zero of gauge.....	579.510
French River B.M. (French 26) .	591.280
"Chippewa" above French River "26" (Section No. 1)	59.235
North Bay B.M. "Chippewa".....	650.515
French River, zero of gauge (from Harbor Beach).....	579.859
French River B.M. "French 26".....	591.629
North Bay B.M. "Chippewa".....	650.864
French River, zero of gauge (from Mackinaw City).....	579.861
French River B.M., "French 26".....	591.631
North Bay B.M. "Chippewa".....	650.866
Collingwood, zero of gauge (from Harbor Beach).....	582.243
Collingwood B.M. 668½.....	587.903
Collingwood, zero of gauge (from Mackinaw City).....	582.201
Collingwood B.M. 668½.....	587.861

DIFFERENCES.

Bench Mark "Chippewa."

Route.	Elevation.	Difference.
Tibbett's Point, Toronto, Collingwood, French River, North Bay	650.515	
Harbor Beach, French River, North Bay	650.864	0.349
Mackinaw City, French River, North Bay	650.866	0.351

Bench Mark 668½.

Tibbett's Point, Toronto, Collingwood	587.477	
Harbor Beach, Collingwood	587.903	0.426
Mackinaw City, Collingwood	587.861	0.384

A comparison of the above elevations by automatic gange reduction with the elevations by the Precise party is as follows:—

B. M.	Location.	Elevation by Precise Party.	Elevation by automatic gauge.	Transfer.	Differences.
646½	Toronto	254·15	254·427	From Tibbett's Point.	+0·277
668½	Collingwood	587·20	587·477	" " "	+0·277
Chippewa	North Bay via Rouses' Point.	649.86	650·515	" " "	+0·655
"	" " "	649·86	650·864	" Harbor Beach...	+1·004
"	" " "	649·86	650·866	" Mackinaw City...	+1.006

'The above digest is on the basis that the differences of elevations between the bench mark "1881" Chapman building, Rouses' Point, N.Y., Harbor Beach and Mackinaw City, Mich., are relatively correct. Such, however, cannot be the case absolutely, though it is reasonable to presume them to be relatively correct, judging by the number of years the gange records have been kept, the extreme accuracy of the precise level lines entering into their connection, and the rigor of the 1903 adjustment of the United States level net."

The figures given by Mr. Chaplean as to elevations by water transfer differ slightly from the deductions made by Mr. Chaloner. But, of course, these will vary, according to number of simultaneous readings compared, eliminations of certain readings mostly affected by high winds, and extent of observations made. A complete adjustment could only be made after several years of simultaneous observations. The results, however, are close enough for all practical purposes and are a check on computations and precise level results.

The numerous checks obtained have permitted a compensation and adjustment of unavoidable small errors for all precise level lines, which practically eliminates the slight differences at connecting benches.

INSTRUMENT USED AND METHOD FOLLOWED.

The instrument used is the "Tacheometre Sanguet" (auto-reducteur), made in France under the direction of Mr. R. Steckel, for the Department of Public Works, improved and adapted by him for the Geodetic levelling under his direction.

The rods used are thirteen feet in length, made of three pieces of mahogany, screwed together, and divided into feet, tenths, hundredths and half-hundredths.

The method of two simultaneous lines, A and B or double turning points was followed, with two rodmen, one for foresights, the other for backsights, readings being taken at equal distance from the instrument, fore and aft.

The difference in elevation found between two turning points as foresights must be the same when these two points become backsights.

Two sets of level readings are made, the first set being two foresights and then two backsights, and the second set being the reverse, the telescope making a half-circle between the first and the second set.

A double faced level, screwed to the telescope and kept out of adjustment, is used for the second set of level readings.

For full details of the instrument and rod, as well as for a complete description of methods the reader is referred to official reports to the Minister of Public Works, by Mr. R. Steckel, M.Can.Soc.C.E., for the years 1891, 1898 and 1906.

COST.

The field work in connection with the precise levelling commenced in October, 1904, and was completed in November, 1906, at a total expenditure of $29,648.91, or $31.36 per mile.

Apart from this the sum of $5,219.85 was expended in office work, for reductions, computations, &c.

Compared with some other extensive precise levelling of a similar nature in other countries, this rate per mile seems high, but was unavoidable on account of the climatic conditions, which were very unfavourable throughout the whole period of field work.

Generally, precise work of this character is carried on only when weather conditions are favourable, but in this case there was an absolute necessity to continue the field work during late fall, winter and early spring, which are very unfavourable seasons and contributed largely to increase the cost. Under these conditions, it is believed that the cost per mile is very fair, and the results achieved as to precision of work performed rather remarkable.

TABLES OF ELEVATIONS.

In order that the elevations above Mean Sea Level, as determined along the different lines of precise levelling, may be available for future works, tabulated statements have been prepared, giving description of bench marks, their elevation and location. Two different lists are given as follows:—

1st. A reference list of the most important Permanent Benches and their elevations, with descriptive sketch showing exact location.

2nd. A complete reference list, with elevations, of all bench marks, and all other points, where these points are of a fairly permanent nature and can be easily located with the help of the description given.

It will be noticed that two columns of elevations are given, one showing the determinations as made in the field without any correction or adjutsment, the other giving adjusted levels for same points, as deduced after correction of probable errors indicated at connecting bench marks by check lines, the probable errors being distributed in arithmetical ratio to the mileage covered.

However, in transferring the Mean Sea Level datum from the precise level line run from Montreal to North Bay, to the different sections of the survey proper, the adjusted levels were not used as they were not available during the time the field work was in progress. Therefore all elevations shown on plans are based on instrumental determinations without any correction.

It was quite impossible to wait for the check lines to be completed and all the results computed before making the transfers to the territory under survey, as this would have entailed too long a delay to the whole work. As the main base line from Montreal to North Bay progressed, on account of the wide experience of the engineer in charge of the precise levelling, the great care and safe methods used, it was considered quite safe to allow the precise line to be tapped at once by the different sections of the survey and their levels reduced accordingly.

There were several legitimate reasons to believe that these levels could not be, at any point, more than a few inches out from the true determination above mean sea level, and the final results have shown that the elevations as determined are accurate enough for all engineering purposes.

The adjusted levels given are believed to be nearer the correct elevations than the other set of elevations, which was necessarily used, but this can be only settled when the lines receive a final check from a systematic geodetic level development. In so far as this survey is concerned, the results obtained have been satisfactory for all practical purposes, and final adjustments and refinements had to be left for the consideration of a geodetic corps, which no doubt before long will be a permanent branch of the Government service.

As mentioned above, the following lists of elevations refer only to the precise level lines; other elevations in regard to the route surveyed for the canal are fully recorded on the plans. As explained at the beginning of this report all elevations given on the plans are 0.19 to 0.25 higher than they should be if based on the actual figures given in the following list of precise level bench marks, for reasons stated.

Later, when there is time available, it will be possible to list all the bench marks, with their elevations, within the territory surveyed.

The elevations published herein are based upon the Greenbush bench mark, Governor's Island, New York, the accepted elevation of which, since a readjusment made in 1903, is 13.863 above mean sea level.

The initial point upon which these levels depend is a cross-cut on top of plinth course, north end of the Chapman building, at Rouses' Point, Clinton county, in the state of New York; the elevation of this bench mark is derived by a readjustment made in 1903 by the United States Coast and Geodetic Survey, and is now accepted as 107.955 feet above mean sea level, instead of 110.06 as used before the 1903 determination.

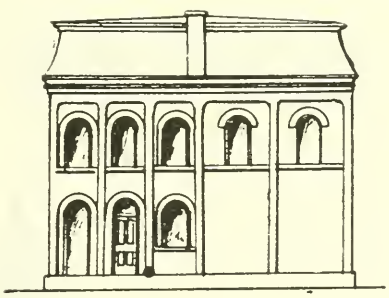
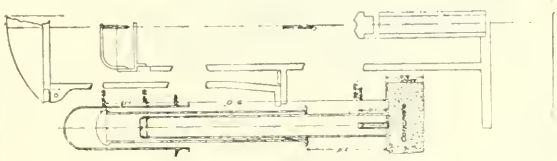
The bench marks described are mostly a chisel line on end of copper bolt driven horizontally in solid rock or in the vertical walls of buildings, bridge abutments or other substantial masonry structures Some of the bench marks are simply a cross cut in solid rock or masonry. All standard bench marks are marked thus $B \ominus^{C} M$ with their respective number in roman numerals cut in the stone.

ROUSES' POINT TO CORNWALL

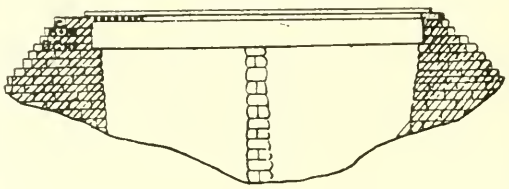
VIA ST. JOHNS, MONTREAL, LACHINE, ST. ANNE DE BELLEVUE, VAUDREUIL, CASCADES, COTEAU LANDING.

DESCRIPTIVE LIST OF MOST IMPORTANT PERMANENT BENCH MARKS.

Datum: Mean Sea Level, Atlantic Ocean at New York.

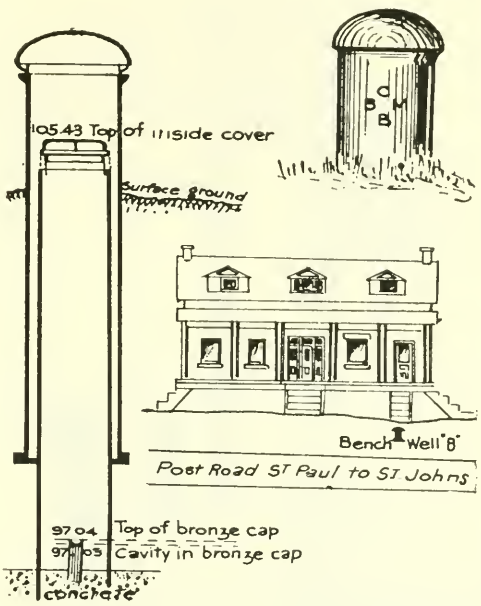
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted
⊕	Top of stone plinth, 20·6 ft. from N.E. corner, 1½ ft. above ground. N. end of Chapman building.....	107·96	107·96
	Rouses' Point, N.Y.		
			
B.W "A."	Cavity in bronze cap of bench well A, placed in 1884, in boundary between Canada and the U. S. of America.....	93·55	93·60
	Rouses' Point—Lacolle.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

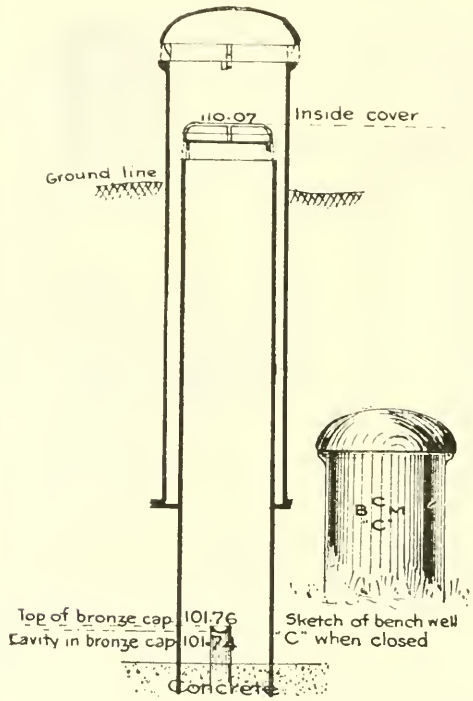
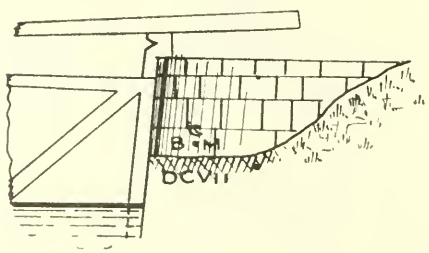
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCIII.	In 2nd course from top, N.W. face W. end of N. abutment of G.T.R. bridge over Lacolle river.....	129·92	129·95
	LACOLLE, P.Q.		
			
DCV.	About 1½ ft. above ground, between 3rd and 4 h window from front S. side of R. C. church.....	157·44	157·50
	ST. VALENTIN DE STOTTSVILLE, P.Q.		
	St Valentin de Stottsvill		

SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

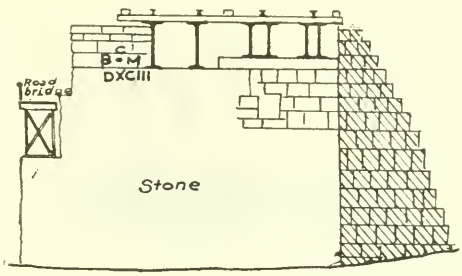
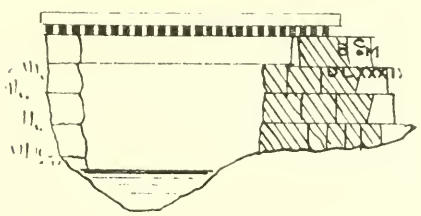
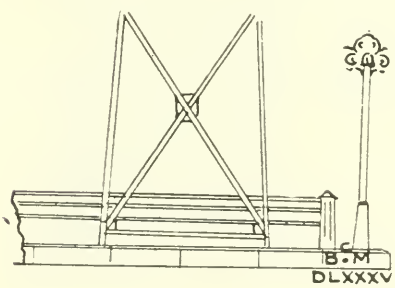
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted
B.W. "B."	Cavity on bronze cap of bench well B, placed in 1884, opposite front door of St. Paul's hotel.....	97·03	97·10
	ST. PAUL DE L'ILE AUX NOIX, PQ.		
			
DCIX.	In 2nd course from ground, 7·7 ft, S.W. corner stone of R.C. church.	141·69	141·78
	STE. BLAISE DE GRANDE LIGNE, P.Q.		

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

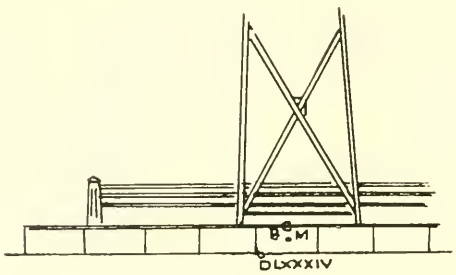
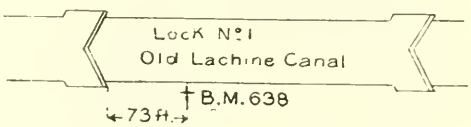
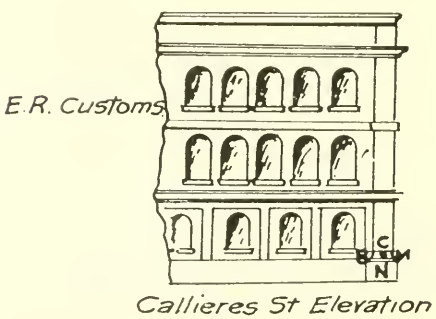
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
B.W. "C."	Top of bronze cap of bench well C, placed in 1884 inside St. Johns barracks grounds.....	101·76	101·89
	ST. JOHNS, P.Q.		
			
D V CVII.	In 4th course from top, lower end of curved wall west side of lock 1, Chambly canal.....	96·45	96·59
	ST JOHNS, P.Q.		
			

SESSIONAL PAPER No. 19a

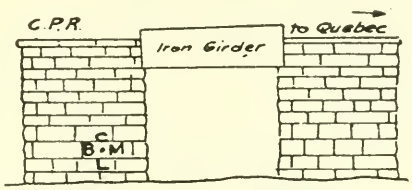
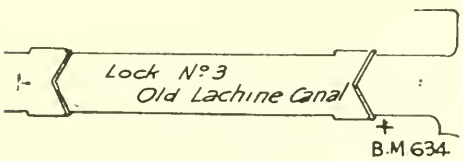
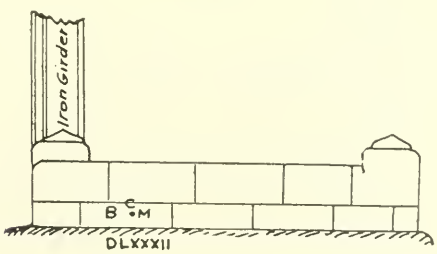
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DXCIII	In 4th course from top, W. end of N. abutment of G.T.R. bridge over Lacadie river, 485 feet S. of mile 20 from Montreal.....	110·37	110·53
	LACADIE, P.Q.		
			
DLXXXIX.	In top course, east face of E. half of N. abutment of beam culvert, 1,570 feet N. of mile 13 from Montreal.....	48·82	49·02
	BROSSEAU, P.Q.		
			
DLXXXV.	In stone base of iron railing, N. side of vehicle road, close to 1st steel arch from St. Lambert end of Victoria bridge.....	67·55	67·78
	ST. LAMBERT, P.Q.		
			

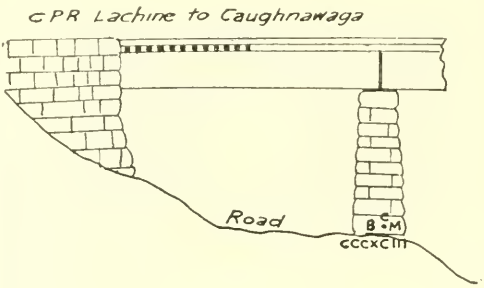
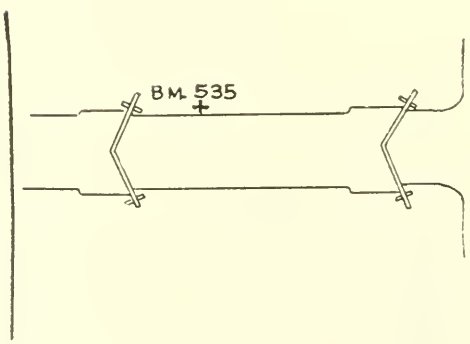
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Instrumental.	Elevations. Adjusted.
DLXXXIV.	In S. face of stone base of N. iron railing, opposite 1st steel arch Point St. Charles end of Victoria bridge	67·18	67·42
	POINTE ST. CHARLES.		
			
638	+ Cut on coping, 96 ft. from S. upper gate old lock 1, Lachine canal	36·94	37·19
	MONTREAL.		
			
N	In plinth, of Montreal Custom House on Callieres street close to Commissioner street	49·03	49·28
	MONTREAL.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
L.	In third course from ground 4½ feet from Forsyth street, E. face of S. abutment of C.P.R. overhead crossng opposite Longueuil ferry.....	37·76	38·02
	MONTREAL.		
			
54	+Cut on coping one foot from S. edge, 5 feet E. of S. lower gate of old lock 3, Lachine canal.....	58·61	58·87
	MONTREAL.		
			
DLXXXII.	n base course, 4½ feet from W. end of E. stone guard wall, S. abutment of Côte St. Paul bridge over Lachine canal	72·74	73·00
	MONTREAL.		
			

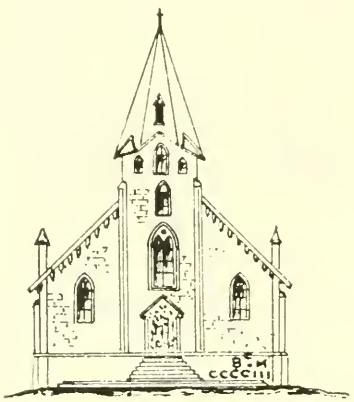
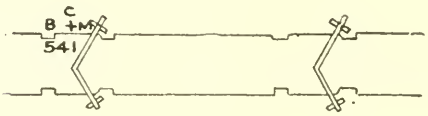
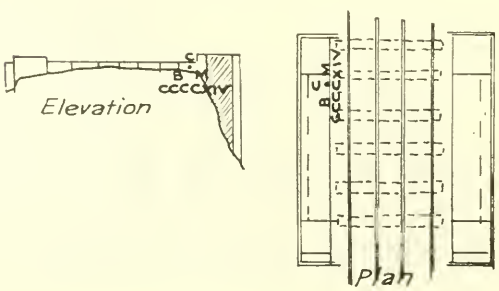
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
CCCXCIII.	In 2nd course above ground, S.W. face of 1st pier. Lachine end of C.P.R. bridge over St. Lawrence river.....	93·85	94·13
	LACHINE, P.Q.		
			
535	+ Cut on coping above centre of new lock 5 of N. side of Lachine canal.....	74·42	74·71
	LACHINE, P.Q.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

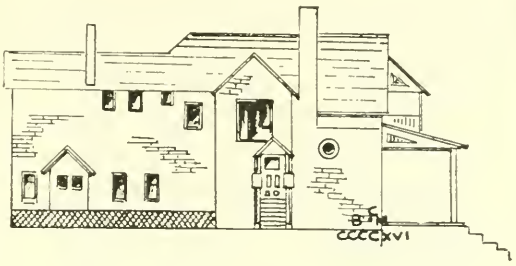
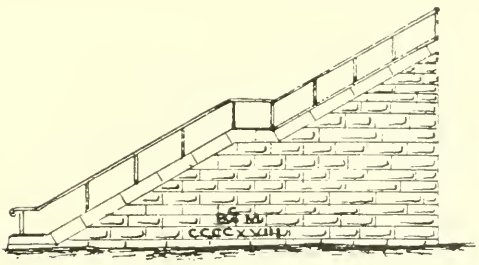
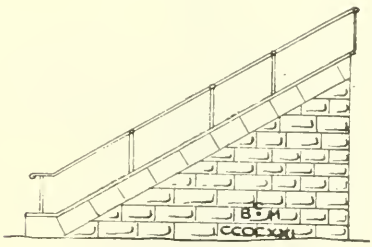
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
CCCXCIV.	In 3rd course above foundation front of buttress, S.E. corner of R. C. church.....	82·87	83·16
	LACHINE, P.Q.		
CCCXCVIII.	In first cut stone above ground, west face, about one foot from rear end of R. C. church.....	93·53	93·85
	DORVAL P.Q.		

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted
CCCCIII.	In fourth stone above ground, S.E. corner of R. C. church.....	83·95	84·28
	POINTE CLAIRE, P.Q.		
			
541	+ Cut on coping W. recess of lower new lock gate at Ste. Anne de Bellevue.....	81·4	[illegible]
	ST. ANNE DE BELLEVUE P.Q.		
			
CCCCXIV.	In north face of stone railing about one foot above coping, S. side of E. abutment of G.T.R. bridge between Ile Perrot and Vaudreuil.....	91·89	92·27
	ILE PERROT, P.Q.		
			

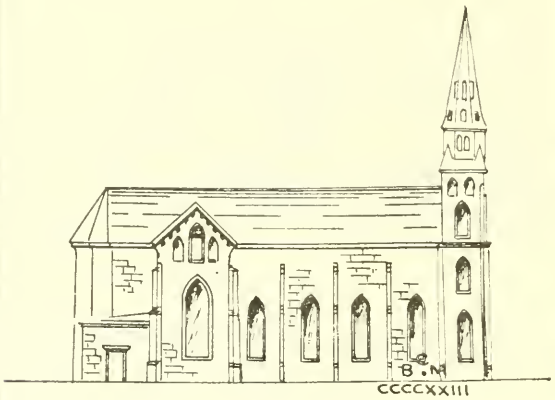
SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

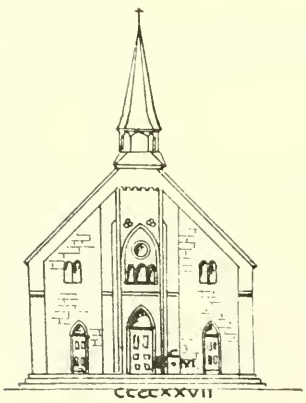
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
CCCCXVI.	About 3 feet above ground, 2 feet from S. W. corner of Geo. Foster's residence 1¼ miles from Vaudreuil station.....	84·66	85·05
	VAUDREUIL, P.Q.		
			
CCCCXVIII.	About 2½ feet above coping N. face of stone stairway leading up to lock 2, Soulanges canal.....	95·37	95·75
	CASCADES, P.Q.		
			
CCCCXXI.	About 2 feet above coping N. face of stone stairway leading up to lock 4, Soulanges canal.....	142·02	142·39
	CASCADES, P.Q.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
CCCCXXIII.	About 14 feet above top step, N. face of stone buttress, N.W. corner of R. C. church	158·39	158·75
	CEDARS, P.Q.		

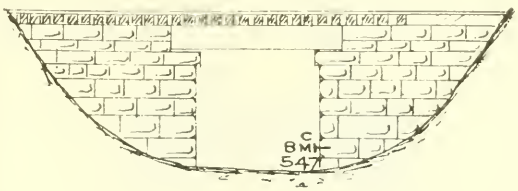
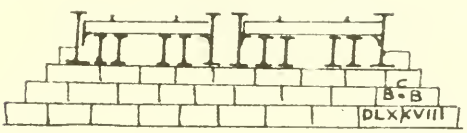
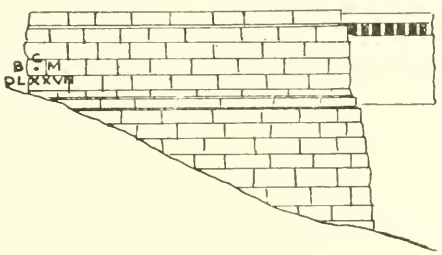


CCCCXXVII.	In first stone above plinth, W. side of E. entrance to R. C. church.	158·48	158·81
	COTEAU DU LAC, P.Q.		

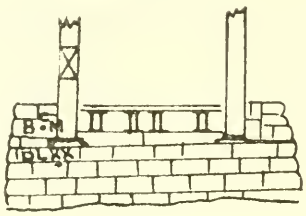
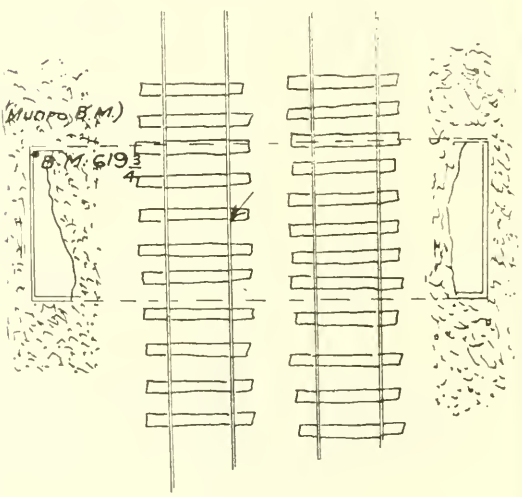


SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

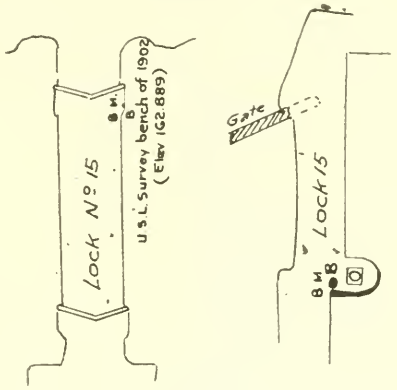
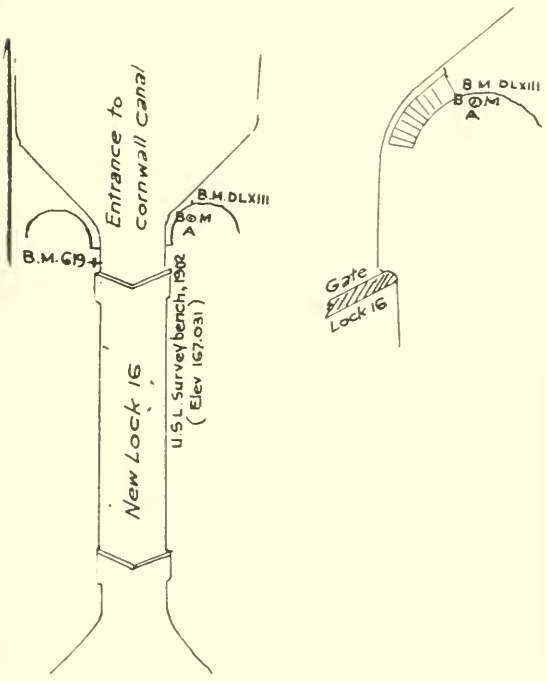
Bench Marks.	Description and Location.	Elevations	
		Instrumental.	Adjusted.
547	Iron bolt driven horizontally into N. face S.W. corner G.T.R bridge over canal road to Coteau du Lac, S. side of canal	160·98	161·30
	COTEAU LANDING, P.Q.		
			
DLXXVIII.	In 2nd course from base, S. end of E. abutment of G.T R. bridge, 660 feet E. of St. Zotique station	154·65	154·97
	ST. ZOTIQUE, P.Q.		
			
DLXXVII.	In 4th course from top W. end of S. face of W. abutment of G. T.R. bridge over River Beaudette.....	169·45	169·76
	RIVIERE BEAUDETTE, P.Q.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DLXX.	In 2nd course from top S. end of W. abutment of G.T.R. bridge over Black river.	162·97	163·27
	LANCASTER, ONT.		
			
619¾	S.W. corner of coping S. end of G.T.R. culvert at mile 63.	180·83	181·13
	SUMMERSTOWN, ONT.		
			

SESSIONAL PAPER No. 19a

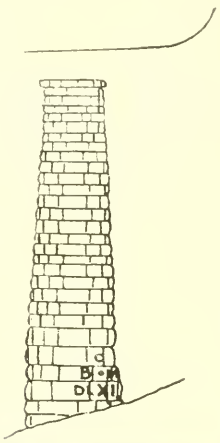
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
"B."	3 feet E. of W. edge of stone 4·4 ft, S. of N. face of S. wall of old lock 15, U.S.L.S.B.M. of 1902 (elevation 162.889).....	162·59	162·89
	CORNWALL, ONT.		
			
"A."	+63 feet S. of front face of wall, 1·9 feet from rear edge of new entrance lock, U.S.L.S.B.M. of 1902 (elevation 167.031).....	166·73	167·03
	CORNWALL, ONT.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DLXI.	In N.E. corner, 3rd course from base, N. shore pier of N. Y. and O. Railway bridge over St. Lawrence river.....	165·36	165·66

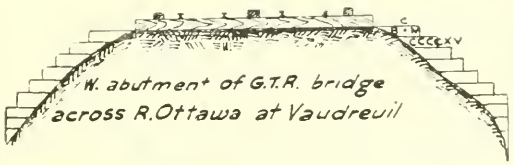
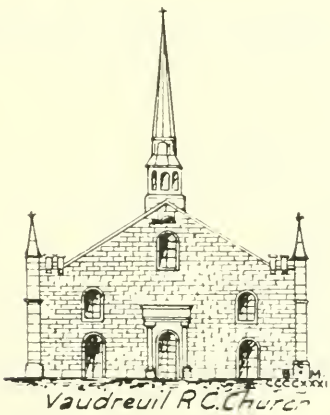
CORNWALL, ONT.



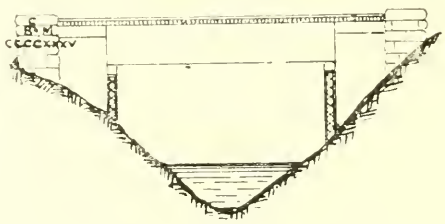
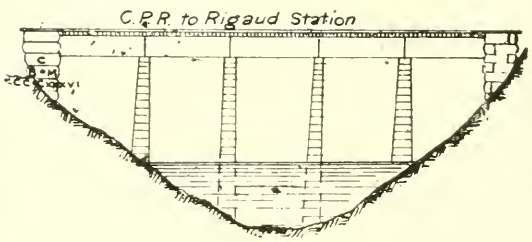
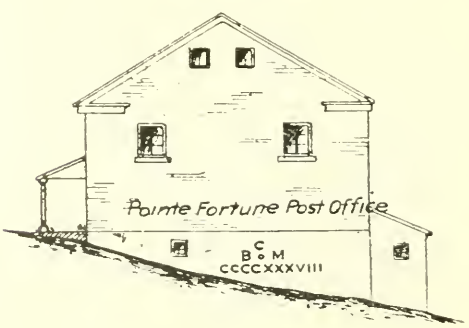
VAUDREUIL TO NORTH BAY.

DESCRIPTIVE LIST OF MOST IMPORTANT PERMANENT BENCH MARKS.

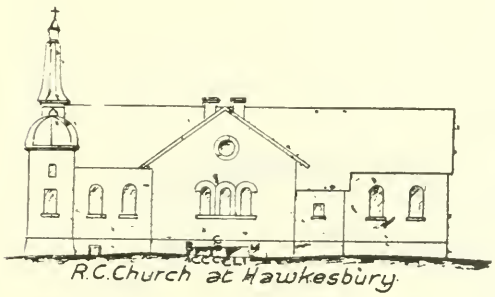
Datum: Mean Sea Level, Atlantic Ocean at New York.

Bench Marks.	Description and Location.	Elevations.		
		Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCXV.	Chisel line in end of copper plug, driven horizontally into west face, south of track of west abutment of G. T. R. bridge over Ottawa river	88.49	88.30	88.61
	VAUDREUIL.			
				
CCCCXXXI	Chisel line in end of copper plug, driven horizontally into east face of base of turret on south east corner of R. C. church	86.74	86.55	86.89
	VAUDREUIL.			
				

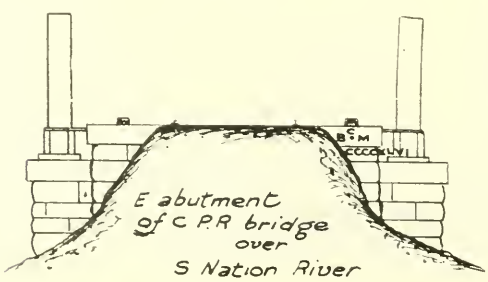
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. = 94·10 As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCXXXV	Chisel line in end of copper plug, driven horizontally into south side of west abutment of C.P.R. bridge over Raquette river, parish of Rigaud	98.72	98.53	98.89
	COUNTY OF VAUDREUIL.			
				
CCCCXXXVI	Chisel line in end of copper plug, driven horizontally into south face of west abutment of C.P.R. bridge over Riviere à la Graisse	99.56	99.37	99.74
	RIGAUD.			
				
CCCCXXXVIII	Chisel line in end of copper plug, driven horizontally into stone foundation of wooden house, general store and post office, of Wm. Brown	83.92	83.73	84.13
	POINTE FORTUNE.			
				

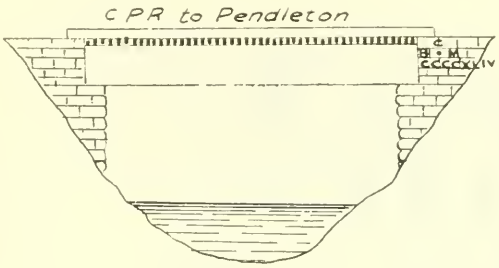
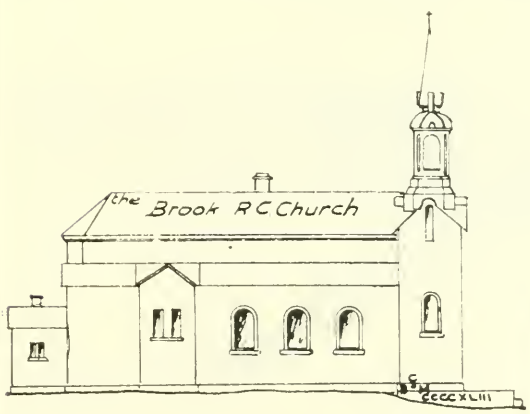
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted
CCCCXLI	Chisel line in end of copper plug, driven horizontally into stone foundation near east corner of north front of R. C. church...	191.73	191.54	191.9
	ST. EUGENE.			
CCCCLI	Chisel line in end of copper plug, driven horizontally into stone between two basement windows, west end of wing on west side of R. C. church.....	148.11	147.92	148 34
	HAWKESBURY.			
				

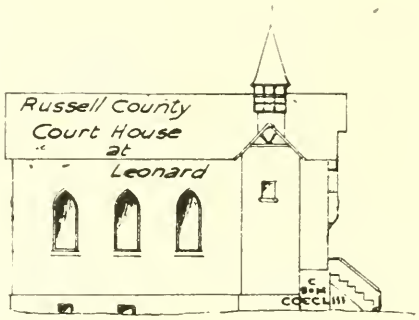
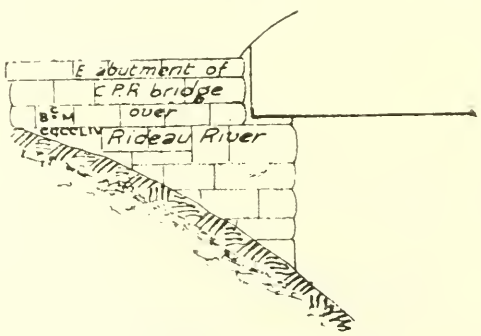
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCXLIX	Chisel line in end of copper plug, driven horizontally into north wall, stone foundation of F. N. Carriere's store and post office of McAlpins	223.47	223.28	223.69
	COUNTY OF PRESCOTT.			
CCCCXLVII	Chisel line in end of copper plug, driven horizontally into north side of stone foundation of house owned by Grand Hotel Co.	166.99	166.80	167.23
	[CALEDONIA SPRINGS.			
CCCCXLVI	Chisel line in end of copper plug, driven horizontally into coping stone in east end north of track, of north abutment of C. P. R. bridge over Nation river	168.78	168.59	169.05
	PLANTAGANET.			
				

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCXLIV	Chisel line in end of copper plug, driven horizontally into stone in second course from top, southeast side of northeast abutment of bridge (bearing mileage 57.1) over Dickensons brook.....	192.51	192.32	192.78
	COUNTY OF PRESCOTT.			
				
CCCCXLIII	Chisel line in end of copper plug, driven horizontally into stone in north face of foundation under steeple, northwest corner of R. C. church.....	210.02	209.83	210.31
	THE BROOK.			
				

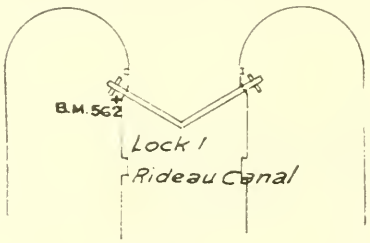
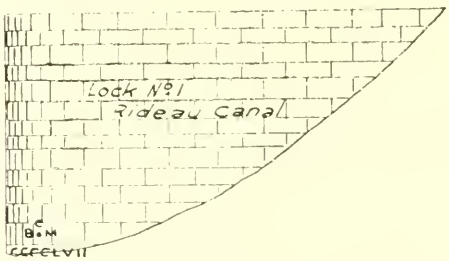
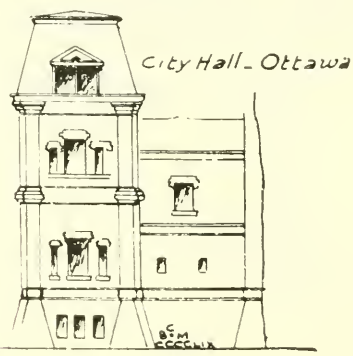
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCLIII	Chisel line in end of copper plug, driven horizontally into stone foundation in north side of projection or facade, on front or west end of small court house on east side of road, and second building south of C.P.R. track, at	271.57	271.38	271.87
	LEONARD.			
				
CCCCLIV	Chisel line in end of copper plug, driven horizontally into stone in third course from top north face of east abutment of C.P.R. bridge (M. and O. line) over Rideau riv..	194.87	194.68	195.22
	HURDMANS BRIDGE.			
				

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCLV	Chisel line in end of copper plug, driven horizontally into stone, about one foot above ground in east or inner face of west abutment of Laurier bridge	217.38	217.19	217.72
	OTTAWA.			
CCCCLVI	Chisel line in end of copper plug, driven horizontally into first stone above ground, north end of first pier west of Rideau canal, of Dufferin bridge, Wellington street.	213.01	212.82	213.35
	OTTAWA.			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

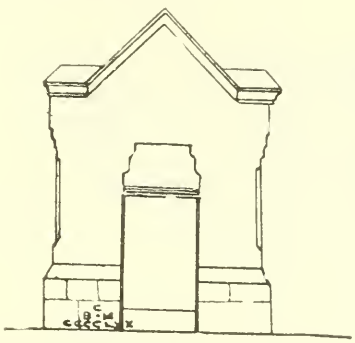
Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
562	Cross cut in top of coping of west side, just north of lower gate of lock No. 1, Rideau canal.	154.33	154.14	154.68
	OTTAWA.			
				
CCCCLVII	Chisel line in end of copper plug, driven horizontally into stone in thirteenth course from top, northwest face of curved wall, west side of entrance to lock No. 1, Rideau canal.	135.37	135.18	133.72
	OTTAWA.			
				
CCCCLIX	Chisel line in end of copper plug, driven horizontally into stone in south, or Albert street face, just behind south corner of turret on southwest corner of City Hall.	240.55	240.36	240.89
	OTTAWA.			
				

SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

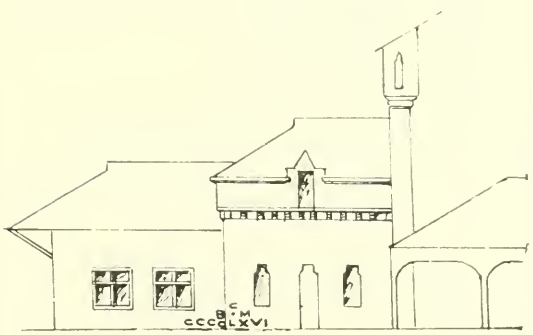
Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCLXX	Chisel line in end of copper plug, driven horizontally into dressed stone in east face of portico, just south of door, rear entrance of Hull R. C. church, corner of Victoria street and Laurier avenue	177.90	177.71	178.25

HULL.

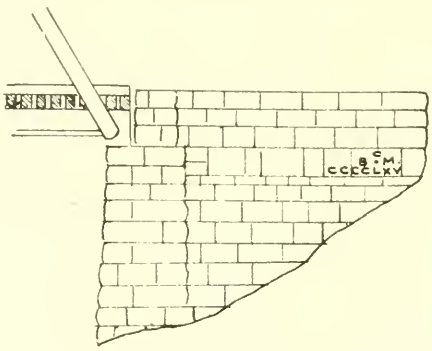
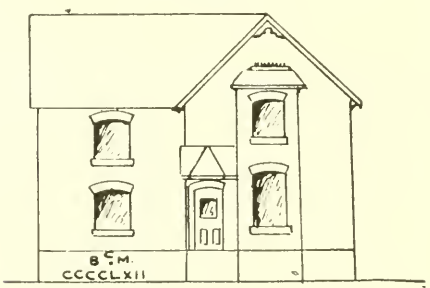
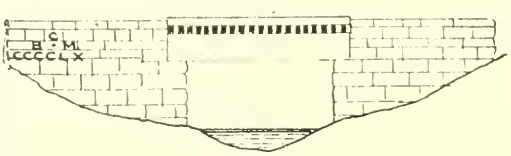


CCCCLXVI	Chisel line in end of copper plug, driven horizontally into stone foundation, front, or Broad street face, of second class waiting room of Union station (C.P.R.)	184.72	184.53	185.06

OTTAWA.

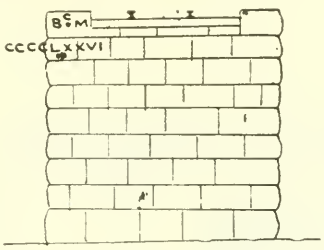
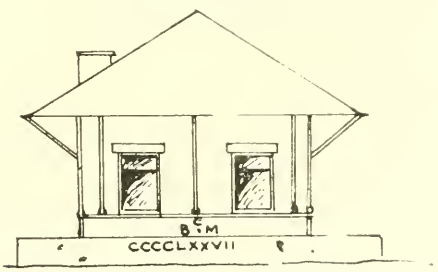


DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted
CCCCLXV	Chisel line in end of copper plug, driven horizontally into stone in third course from top, upper or west face of south abutment of Prince of Wales (C.P.R.) bridge, Chaudiere.....	185.54	185.35	185.89
	OTTAWA.			
				
CCCCLXII	Chisel line in end of copper plug, driven horizontally into stone foundation of east or front wall of south wing of house of John Whitton, second house north of C.P.R. track, west side of cross road at village of.....	203.38	203.19	203.74
	BRITANNIA.			
				
CCCCLX.	Chisel line in end of copper plug, driven horizontally into stone in 4th course from top, N.E. face of S.E. abutment of Grand Trunk Railway bridge over Carp river, Huntley, and W. of town of.....	307·54	307·35	307·93
	CARP.			
				

SESSIONAL PAPER No. 19a

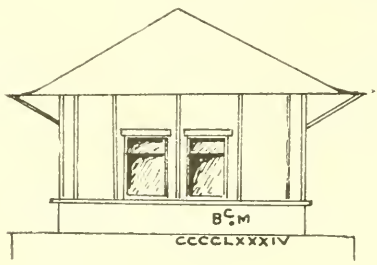
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCLXXVI.	Chisel line in end of copper plug, driven horizontally into S.E. face of coping stone on S. corner of N.W. abutment of G.T.R. bridge over Mississippi river.....	290·32	290·13	290·73
	GALETTA.			
				
CCCCLXXVII.	Chisel line in end of copper plug, driven horizontally into stone in centre of N. end of C.P.R. station of.....	300·74	300·55	301·17
	CARNPRIOR.			
				
CCCCLXXXVII	Chisel line in end of copper plug, driven horizontally into stone foundation of front or N.E. face of brick schoolhouse.....	267·26	267·07	267·71
	SAND POINT.			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

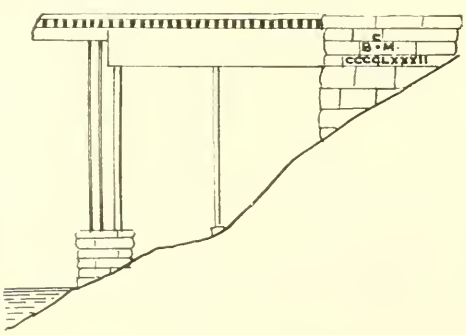
Bench Marks.	Description and Location.	Elevations.		
		Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCLXXXIV.	Chisel line in end of copper plug, driven horizontally into stone in E. end of railway station.....	418·01	417·82	418·48

RENFREW.



CCCCLXXXII.	Chisel line in end of copper plug, driven horizontally into stone in 3rd course from top, N.E. face of N.W. abutment of C.P.R. bridge over Bonnechere river.....	385·53	385·34	386·00

RENFREW.

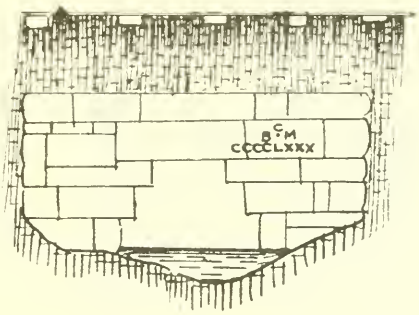


SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

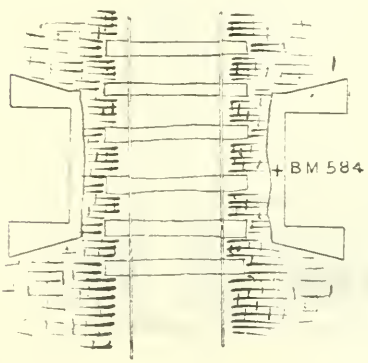
Bench Marks.	Description and Location.	Elevations		
		Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted
CCCCLXXX.	Chisel line in end of copper plug driven horizontally into stone in 2nd course from top, N.E. end of large covered stone culvert under C.P.R. (mileage 801), and on lot 19, con. 11, township of Ross	509·69	509·50	510·19

COUNTY OF RENFREW.

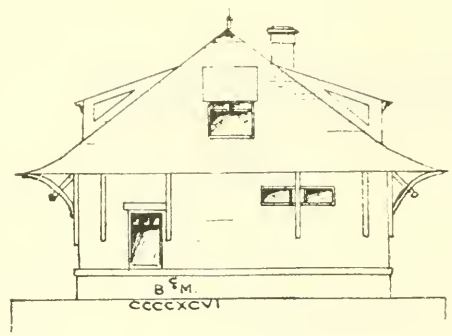
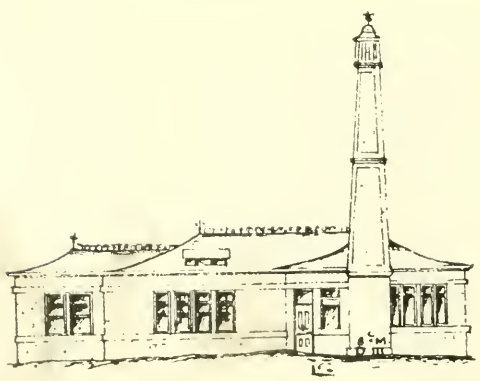


584	Cross cut in top, at centre of W. end of little concrete culvert under C.P.R., about 1,140 feet S. of mile post 93 and opposite Mrs. Crawford's property lot 14, con. 11, township of Westmeath	444·49	444·30	445·01

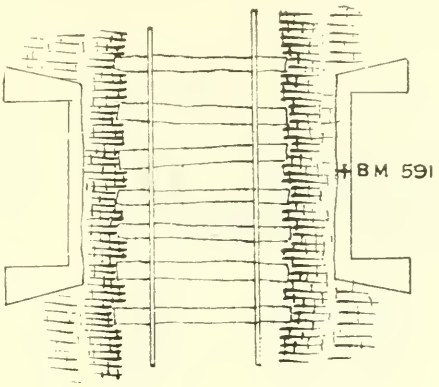
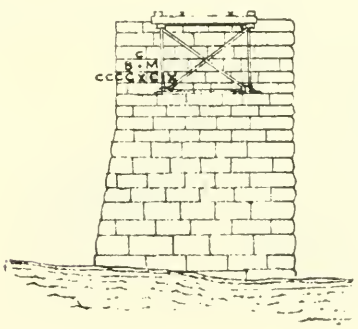
COUNTY OF RENFREW.



DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Mark	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCXCVI.	Chisel line in end of copper plug, driven horizontally into stone in W. end of C.P.R. station at..	382·48	382·29	383·04
	PEMBROKE.			
				
DIII.	Chisel line in end of copper plug, driven horizontally into stone in E. face of foundation of large chimney of Pembroke water works.	377·64	377·45	37 ·19
	PEMBROKE.			
				

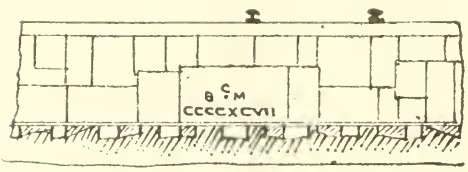
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
591	Cross cut in top at centre of N.E. end of covered concrete culvert under C.P.R., 225 feet N.W. of station and just S.E. of road to Ottawa river and village of.	463·55	463·36	464·12
	PETAWAWA.			
				
CCCCXCIX.	Chisel line in end of copper plug, driven horizontally into stone in 4th course from top, S.E. or inner face of N.W. abutment, S.W. of track of C.P.R. bridge over Petawawa river.....	455·72	455·52	456·29
	PETAWAWA.			
				

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

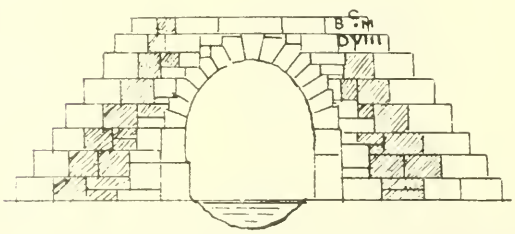
Bench Mark.	Description and Location.	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
CCCCXCVII.	Chisel line in end of copper plug, driven horizontally into stone looking N. and inward at S. side of C. P. R. locomotive turn table at	521·64	521·45	522·23

CHALK RIVER.



DVIII	Chisel line in end of copper plug, driven horizontally into end of top altar step on S. corner of large arched stone culvert under C.P.R., 19·06 miles from Chalk River and on lot 9, con. VI, township of Head	568·82	568·63	569·4

NIPISSING DISTRICT.

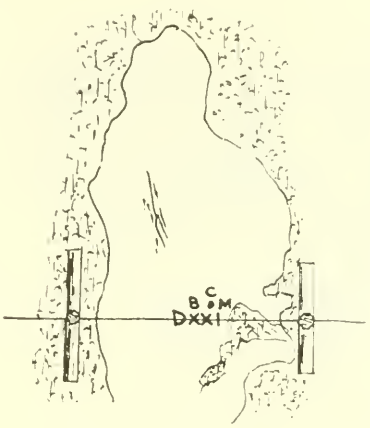


SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

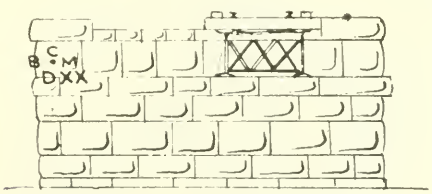
Bench Marks.	Description and Location	Elevations. Based on Lachine B.M. =94·10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
DXXI.	Top of copper plug, driven vertically into flat bed rock on C.P.R. right of way, just beside N. fence, 40 feet N. of track and 100 feet N. of railway station.....	474·36	474·17	475·02

ROCKLIFFE.



DXX.	Chisel line in end of copper plug, driven horizontally into E. face of stone on S. end of 2nd course from top, E. or inner face of W. abutment of C.P.R. bridge over Grant's brook (mileage, 29·89 from Chalk River), and on lot 31. Mattawa road lots of Head.....	464·58	464·39	465·25

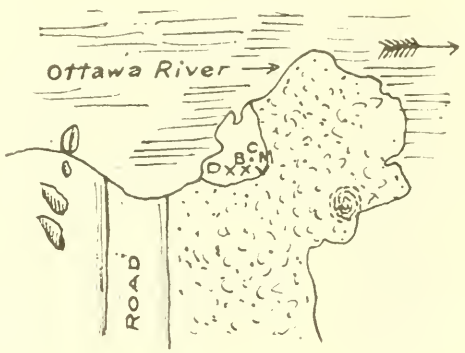
NIPISSING DISTRICT.



DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. +94.10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
DXXV.	Top of copper plug, driven vertically into top at W. side of small rock projection or peninsula on S. shore of Ottawa river, at foot of road leading from government road to Ottawa river, 1 mile W. of mouth of Bissett river, and above head of Rocher Capitaine rapids...	450·83	450·64	451·51

NIPISSING DISTRICT.

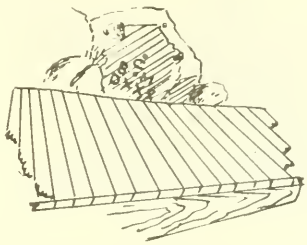
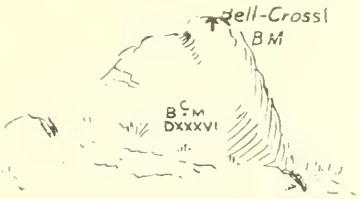
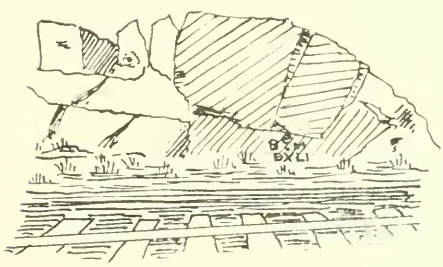


DXXIV.	Top of copper plug, driven vertically into solid rock at foot of cliff, S.E. shore of Ottawa river, at foot of lower or Deux Rivieres rapids, and about 200 feet below end of little point, where ruins of Mr. Ranson's old residence stands.....	454·63	454·44	455·35

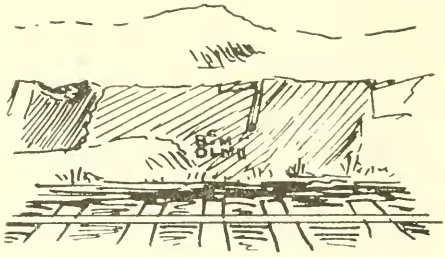
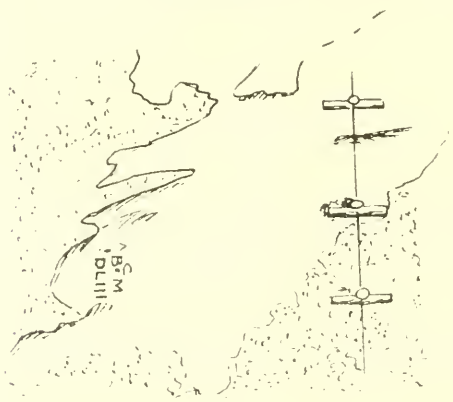
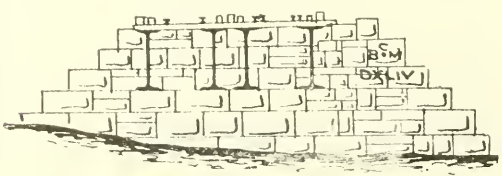
DEUX RIVIERES.

SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. +94.10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
DXXX	Chisel line in end of copper plug, driven horizontally into N. side of boulder just S. of station platform, about 26 feet from W. end C.P.R. station	531·63	531·44	532·36
	KLOCK.			
				
DXXXVI.	Chisel line in end of copper plug, driven horizontally into S. side of boulder bearing Messrs. Cross and Bell's B.M., on S. shore Ottawa river, at foot of cleared survey line from railway to river, 1 mile E. of C.P.R. station of	500·72	500·53	501·47
	MATTAWA.			
				
DXLI	Chisel line in end of copper plug, driven horizontally into solid rock in cut 15 feet N.E. of track and 600 feet S.E. of mile post 80 from Chalk River	629·22	629·03	630·00
	NIPISSING DISTRICT.			
				

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Based on Lachine B.M. +94,10 (As used on Survey).	Instrumental (Via St. Lambert to Vaudreuil).	Adjusted.
DLVII.	Chisel line in end of copper plug, driven horizontally into shallow rock cut 12 feet N. of track and 1,930 feet W. of mile post 90 from Chalk River, at Mr. Wm. Hill's property, E. of.....	756·84	756·65	757·64
	RUTHERGLEN.			
				
DLIII.	Top of copper plug, driven vertically into flat exposed bed rock, 30 feet N. of track and 745 feet E. of mile post 100 from Chalk River and N. of	782·63	782·44	783·45
	LAKE NASBONSING.			
				
DXLIV.	Chisel line in end of copper plug, driven horizontally into 2nd course from top northwest face, at west end of southeast abutment of C.P.R. bridge over Chippewa creek, southeast of.....	649·86	649·66	650·7
	NORTH BAY.			
				

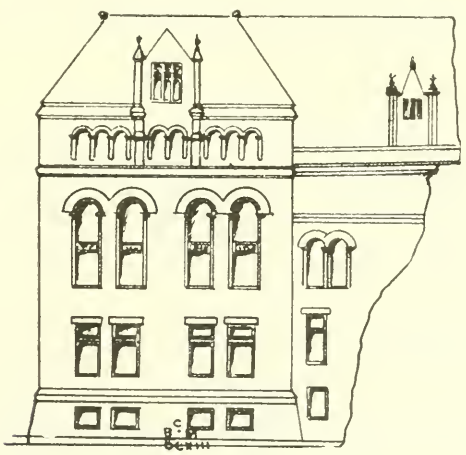
TORONTO TO NORTH BAY.

DESCRIPTIVE LIST OT MOST IMPORTANT PERMANENT BENCH MARKS.

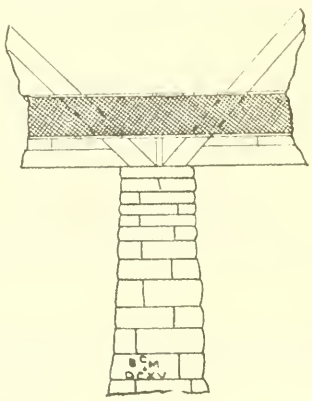
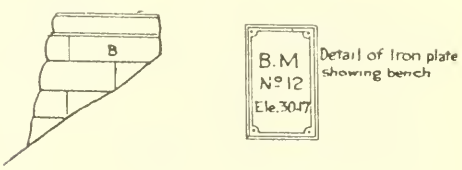
Datum: Mean Sea Level, Atlantic Ocean, at New York.

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCXIII.	Chisel line in end of copper plug driven horizontally into stone in first course above ground in east, or James street side, and about 24 feet from south corner of City Hall.....	296·96	

Toronto.



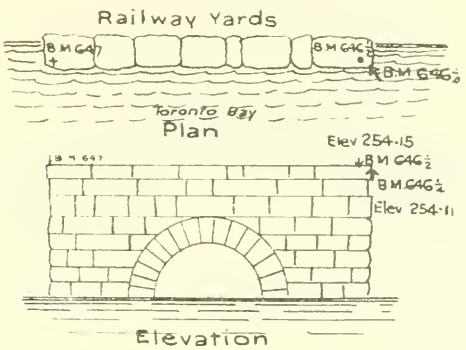
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Instrumental.	Elevations. Adjusted.
DCXV.	Chisel line in end of copper plug driven horizontally into stone in first course wholly above ground, in west face of fourth pier from north abutment of bridge over railway tracks, at foot of John street	254·33	
	TORONTO.		
			
No. 12. Ele. 30·17.	City Engineer's bench mark, protruding shelf on small iron plate screwed into stone in first course below coping, east face of north abutment of Bathurst street bridge	275·04	
	TORONTO.		
			
Zero.	Georgian Bay Ship Canal automatic water gauge register, in small cabin on north edge, about 30 feet from west end of Queen's Wharf	242·87	
	TORONTO HARBOUR.		
Zero.	Federal Public Works Department automatic water gauge register in shed about 60 ft. from west end of Queen's Wharf.	243·28	
	TORONTO HARBOUR.		
Zero.	Toronto Harbour Commissioners' elevated staff water gauge in same shed and beside Public Works Department gauge register. This staff gauge has an independent strip of wood fastened to it, graduated into decimals of a foot, and agreeing in readings with Public Works Department gauge register. Queen's Wharf	245·00	
	TORONTO HARBOUR.		

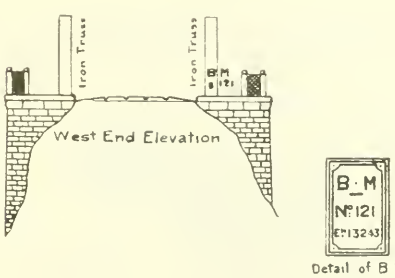
SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
Zero.	Toronto Harbour Commissioners' simple staff gauge, fastened to outer or south face of Queen's Wharf, about 200 feet from west end, and gauge agreeing in readings with original of elevated staff gauge above mentioned. Queen's Wharf	243·00	
	TORONTO HARBOUR.		
647	Cross cut in top of coping stone at south-west corner of large arched portal of a sewer about 800 feet north-west of west end of Queen's Wharf and on north shore of	254·44	
	TORONTO BAY.		



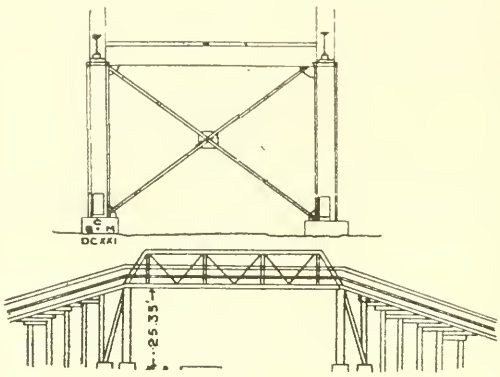
No. 121. Ele. 132·43.	City Engineer's bench mark No. 121, protruding shelf on small iron plate about 2 feet above floor of bridge, screwed into west end of iron truss at west end, south side of Dundas street bridge.	377·08	
	TORONTO.		



DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

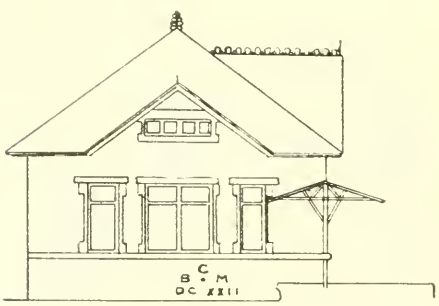
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCXXI.	Chisel line in end of copper plug, driven horizontally into north face of stone pier under east column of iron trestle supporting south end of bridge over C.P.R. tracks, overhead crossing of Weston road, just west of C.P.R. station.....	396·63	

TORONTO JUNCTION.

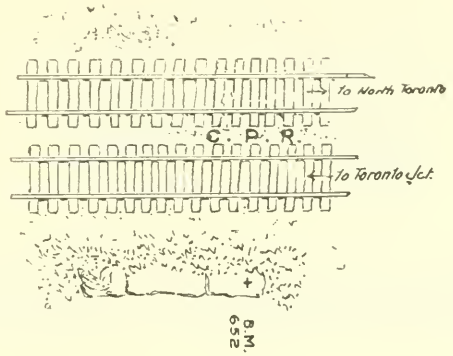
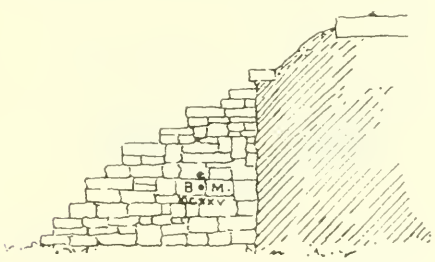
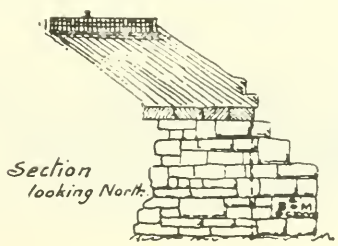


DCXXII.	Chisel line in end of copper plug driven horizontally into stone, about 3 feet above ground, under centre window east end of C.P.R. station at.....	407·26	

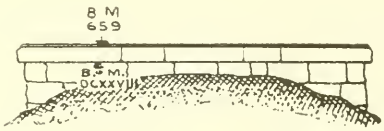
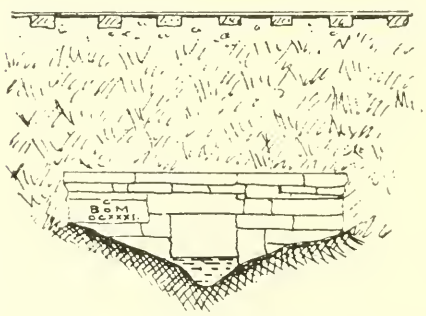
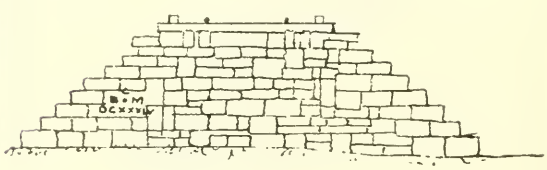
NORTH TORONTO.



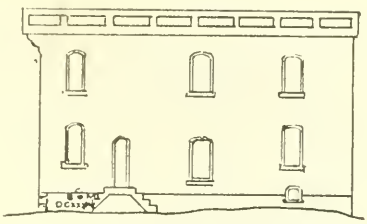
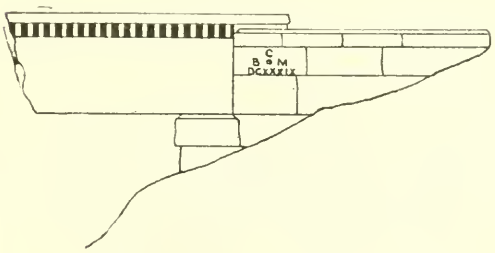
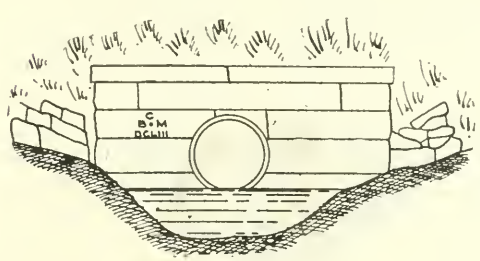
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Instrumental.	Adjusted.
652	Cross cut in top of stone at south east corner of stone box culvert under C.P.R. from Toronto Jct. to North Toronto opposite Galina Oil Co's store house, and 18 feet west of crossing of G.T.R. to Barrie and North Bay.....	393·87	
	TORONTO.		
			
DCXXV.	Chisel line in end of copper plug driven horizontally into stone opposite fourth altar-step from bottom in north face of south retaining wall at east end of stone arch culvert under G.T.R. just north of factory of the Worsted & Braid Co.....	432·60	432·60
	DAVENPORT.		
			
DCXXVII.	Chisel line in end of copper plug driven horizontally into stone, in south face of small wing, or retaining wall at north side, east of track of covered stone culvert under G.T.R., Lot 18, con. III W., township of York	632·26	632·29
	COUNTY OF YORK.		
			

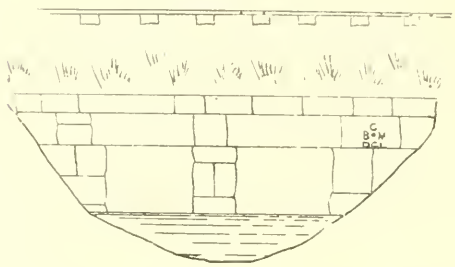
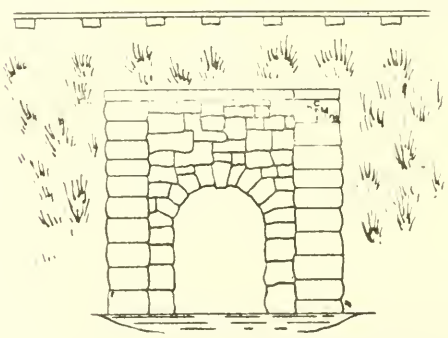
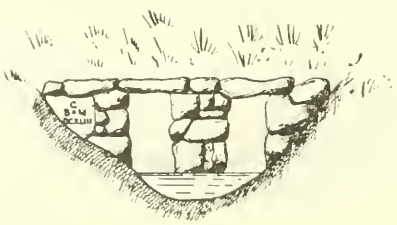
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCXXVIII.	Chisel line in end of copper plug driven horizontally into second stone from south corner, first course below coping, east, or inner face of retaining wall over west end of large covered stone culvert under G.T.R., 210 paces south of station of Thornhill, and opposite Mrs. Teasdales property, lot 15, con. III, township of Vaughan.....	623·82	623·86
	COUNTY OF YORK.		
			
DCXXXI.	Chisel line in end of copper plug driven horizontally into stone in west end of stone box culvert under G.T.R. about 440 yards north of station of King City, lot 5, con. IV, township of King	947·50	947·58
	KING CITY.		
			
DCXXXIV.	Chisel line in end of copper plug driven horizontally into stone opposite fourth altar-step from ground in south face of north abutment of bridge culvert under G.T.R. about 150 yards south of mile post 28 from Toronto and on lot 14, con. I, township of King.....	965·64	965·74
	COUNTY OF YORK.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

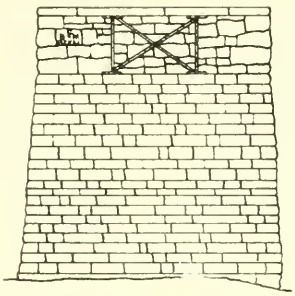
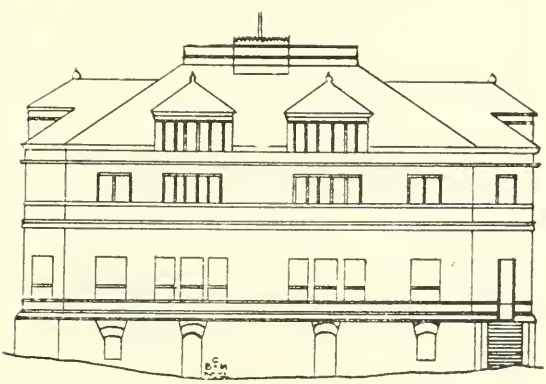
Bench Marks.	Description and Location.	Elevations. Instrumental.	Elevations. Adjusted.
DCXXXV.	Cnisel line in end of copper plug, driven horizontally into stone in top course of foundation feet from south corner of east end of shoe factory belonging to Underhill Seaman & Co.....	884.65	883.76
	AURORA.		
			
DCXXXIX.	Chisel line in end of copper plug driven horizontally into second stone from top east side of north abutment of G.T.R. bridge over Newmarket branch of Holland river, just north of Timothy street crossing.....	777·28	777·41
	NEWMARKET.		
			
DCLIII.	Chisel line in end of copper plug driven horizontally into stone in second course below coping, west end of covered stone culvert under G.T.R. one mile north of Bradford, about 575 feet north of mile post 43 from Toronto and on lot , con. VIII, township of West Gwillimbury.....	726·16	726·32
	COUNTY OF SIMCOE.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

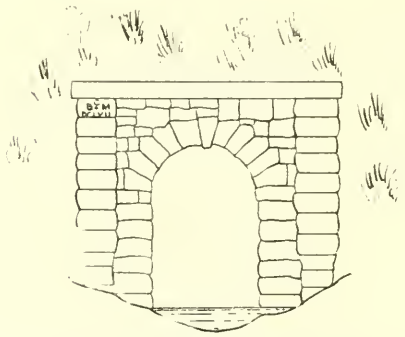
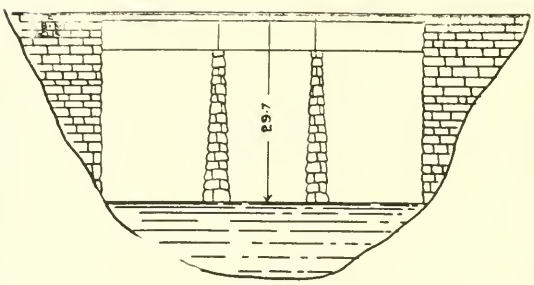
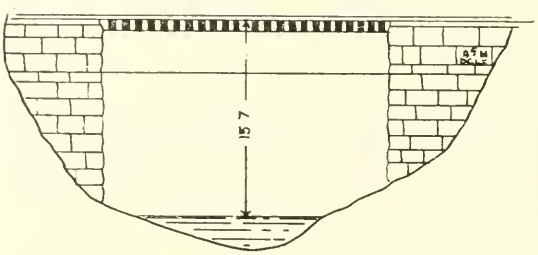
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCL.	Chisel line in end of copper plug driven horizontally into stone in first course from top, west end near south corner of double box culvert under G.T.R., about 350 feet north of town line, and on lot 21, con. I, township of Innisfil..	747·49	747·68
	COUNTY OF SIMCOE.		
			
DCXLVII.	Chisel line in end of copper plug driven horizontally into end of first altar step below coping, of retaining wall on north side east end of arched stone culvert under G.T.R. about 470 yards north of Lefroy crossing, and on Henry Groves property, lot 21, con. IV, township of Innisfil..	757·50	757·70
	COUNTY OF SIMCOE.		
			
DCXLIII.	Chisel line in end of copper plug driven horizontally into stone in west end of double box culvert under G.T.R., about 150 yards south of Craigvale crossing, and on lot 17, con. IX township of Innisfil..	866·24	866·47
	COUNTY OF SIMCOE.		
			

SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

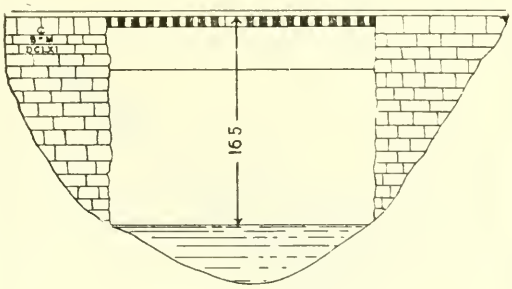
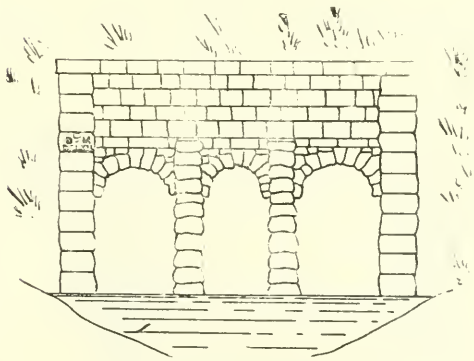
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCXLI	Chisel line in end of copper plug driven horizontally into stone 3 feet below, and south-west of track, south-east or inner face of north-west abutment of G.T.R. bridge over Lovers' Creek, township of Innisfil.....	789·41	789·65
	COUNTY OF SIMCOE.		
			
DCXL.	Chisel line in end of copper plug driven horizontally into stone foundation 1·8 feet above ground, 5·45 feet east of west door, south wall, rear of post office	732·18	732·44
	BARRIE.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

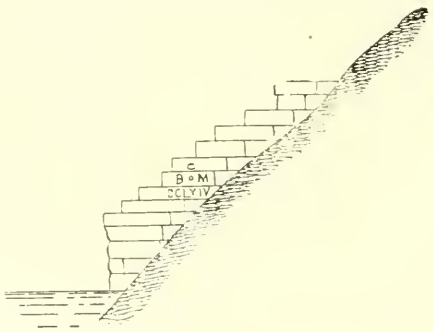
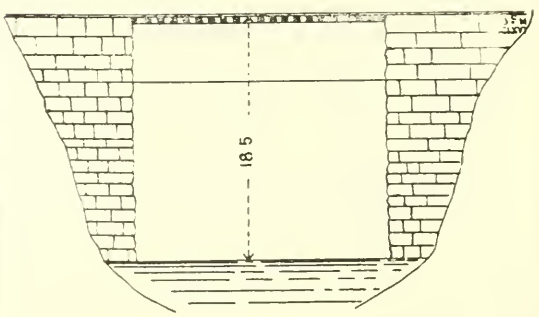
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCLVII	Chisel line in end of copper plug driven horizontally into end of first altar step below coping, on east retaining wall, north end of large arched culvert under G.T.R. about 500 yards from front of lot 32, con. IX, township of Essa..	732·51	732·79
	COUNTY OF SIMCOE.		
			
DCLIX.	Chisel line in end of copper plug driven horizontally into stone in second course from top, north side of east abutment of G.T.R. bridge over Nottawasaga river	628·83	629·13
	ANGUS.		
			
DCLX.	Chisel line in end of copper plug driven horizontally into stone in second course from top, south face of east abutment of G.T.R. bridge over Pine river	621·28	621·59
	ANGUS.		
			

SESSIONAL PAPER No. 19a

DESCRIPTIVE LIST of most Important Permanent Bench Marks—*Continued.*

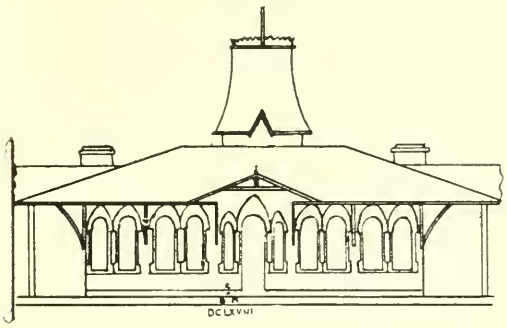
Bench Marks.	Description and Location.	Elevations. Instrumental.	Elevations. Adjusted.
DCLXI.	Chisel line in end of copper plug driven horizontally into stone in second course from top, south-west side of north-west abutment of G.T.R. bridge over Mad river, Essa.....	625·52	625·83
	COUNTY OF SIMCOE.		
			
DCLXII.	Chisel line in end of copper plug driven horizontally into end of fourth altar step, below coping, on retaining wall on east corner of large triple arch culvert under G.T.R. spanning Coates creek, 300 yards southeast of G.T.R. station.....	655·41	655·73
	NEW LOWELL.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCLXIV.	Chisel line in end of copper plug driven horizontally into stone east face of fifth altar step below coping, south-east wall, south-west of track of arched stone culvert under G.T.R. 237 feet south-east of mile post 85 from Toronto and on lot 23, con. II, township of Nottawasaga	700·05	700·40
	COUNTY OF SIMCOE.		
			
DCLXVI.	Chisel line in end of copper plug driven horizontally into stone in top course of west side of south abutment of G.T.R. bridge over Batteaux river, on lot 35, con. VI, township of Nottawasaga.....	685·62	686·00
	COUNTY OF SIMCOE.		
			

SESSIONAL PAPER No. 19a

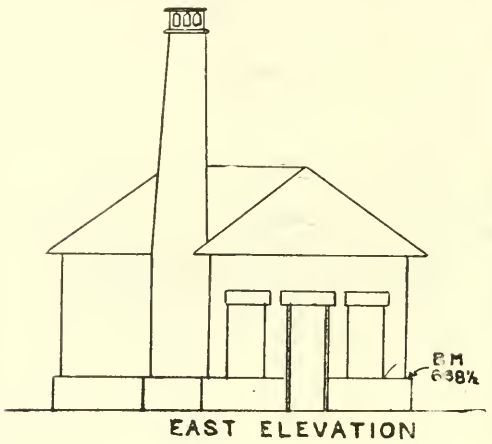
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCLXVIII.	Chisel line in end of copper plug driven horizontally into stone foundation under window, just south of main entrance of G.T.R. station.....	590·55	590·95
	COLLINGWOOD.		
			
DCLXIX.	Chisel line in end of copper plug driven horizontally into stone in first course above ground, south wall of east wing of pumping house of Collingwood Ship Building Co.....	584·79	585·19
	COLLINGWOOD.		

DESCRIPTIVE LIST of most Important Permanent Bench Marks—*Continued.*

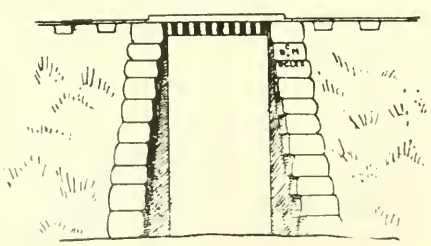
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
668½	Top of iron spike, driven vertically into top of plinth, north-east corner of Collingwood Ship Building Co.'s pumping house. . . .	587·40	587·80

COLLINGWOOD

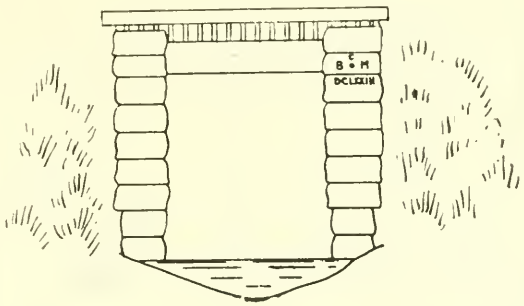
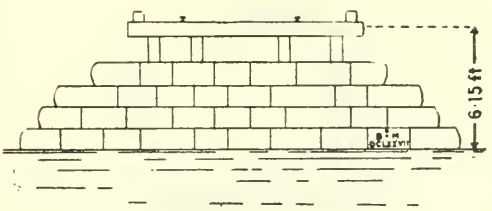


DCLXX.	Chisel line in end of copper plug driven horizontally into end of second altar step from top, south end of east wall of stone culvert under G.T.R., 300 feet east of mile post 65, and about 1 mile east of	732·57	732·83

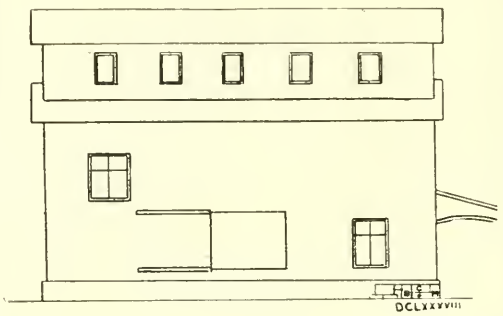
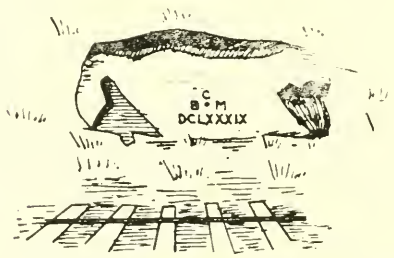
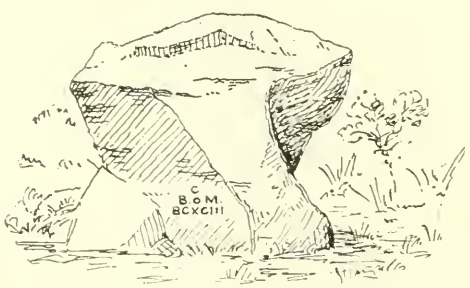
BARRIE.



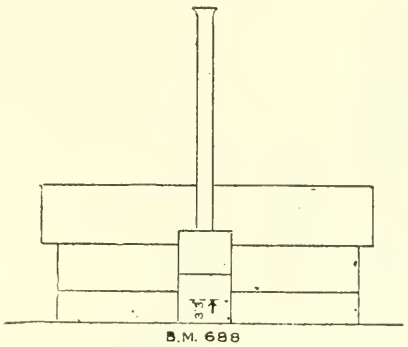
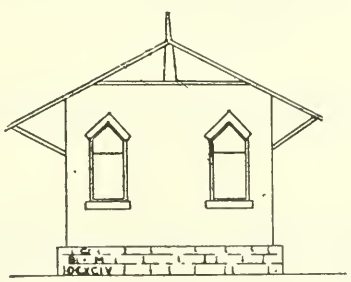
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Instrumental.	Elevations. Adjusted.
DCLXXIII.	Chisel line in end of copper plug driven horizontally into end of second altar step from top, south end of east wall of open stone culvert under G.T.R., 1 760 feet east of mile post 68 from Toronto and on lot 2 regular line of con. II township of Oro COUNTY OF SIMCOE. 	789·41	789·68
DCLXXVII.	Chisel line in end of copper plug driven horizontally into stone in bottom course west or inner face, near south end of east abutment of small open stone culvert under G.T.R., 1·12 miles east of Oro station, and on lot 24, con. IX, township of Oro COUNTY OF SIMCOE. 	796·24	796·54
DCLXXXII.	Chisel line in end of copper plug driven horizontally into stone foundation 4½ feet from west corner, front or south face of west wing on south side of ORILLIA ASYLUM. SOUTH ELEVATION OF WESTERN WING	785·68	786·02

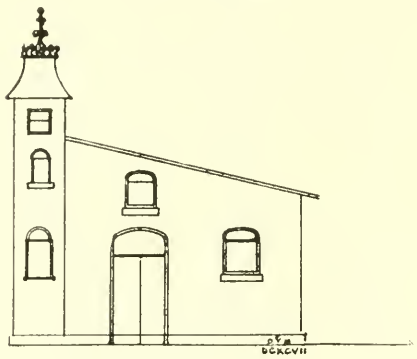
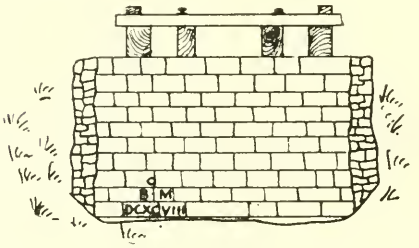
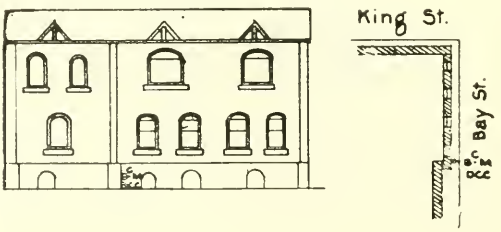
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCLXXXVIII.	Chisel line in end of copper plug driven horizontally into east side face 3·15 feet from north end of foundation of grist mill and elevator of Geo. Vicks and Sons at foot of Tecumseh street . .	731·05	731·40
	ORILLIA.		
			
DCLXXXIX.	Chisel line in end of copper plug driven horizontally into side of solid rock 6·7 feet north-east of G.T.R. rail, 2,105 feet north-west of mile post 138–26 and on lot 7, con. IV, township of North Orillia.	686·96	687·35
	COUNTY OF SIMCOE.		
			
DCXCIII.	Chisel line in end of copper plug driven horizontally into side of rock on G.T.R. right of way, 8·9 feet north-east of track and 1,925 feet east of mile post 145–19 and on lot 20, con. XIV, township of Medonte.	632·93	633·35
	COUNTY OF SIMCOE.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

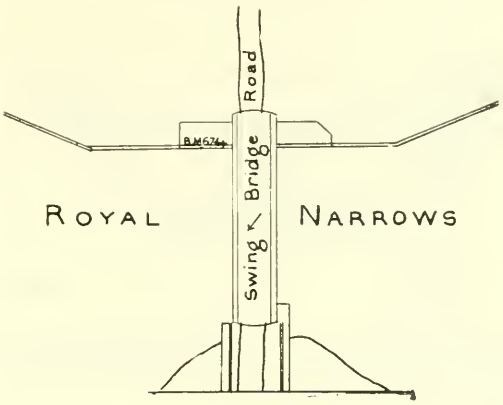
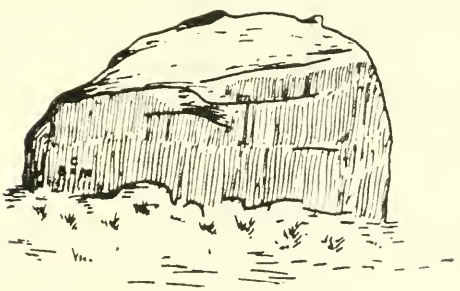
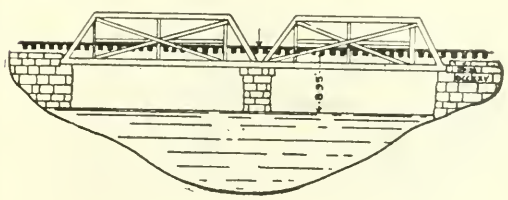
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
688	Crow foot 3·3 ft. above ground, west face of stone foundation of chimney of James Carter's large saw mill.....	586·27	586·71
	FESSERTON.		
	 B.M. 688		
DCXCIV.	Chisel line in end of copper plug driven horizontally into stone foundation 2½ feet above ground and 1 foot from north-east corner north end of G.T.R. station.....	593·65	594·09
	WAUBAUSHENE.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

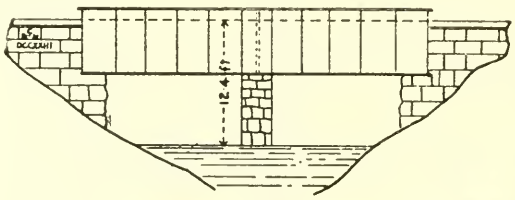
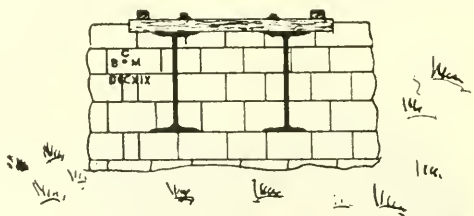
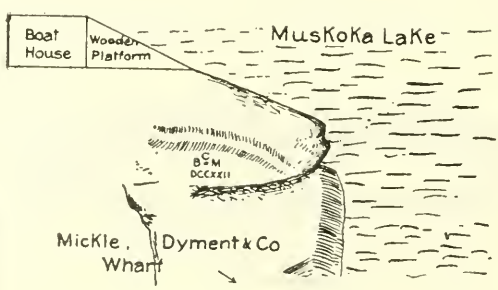
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCXCVII.	Chisel line in end of copper plug driven horizontally into stone foundation 4·6 feet from north-east corner, front of Victoria Harbour Lumber Co.'s power house at	589·24	589·73
	VICTORIA HARBOUR.		
			
DCXCVIII.	Chisel line in end of copper plug driven horizontally into stone in second course above ground south end of east face of west abutment of G.T.R. bridge over Hog river, west of	587·13	587·63
	VICTORIA HARBOUR.		
			
DCC.	Chisel line in end of copper plug driven horizontally into stone foundation 1·2 feet above granolithic pavement under space between 4th and 5th first floor windows from front, north wall (south side of Bay street) of Queen's hotel.....	597·94	598·50
	MIDLAND.		
			

SESSIONAL PAPER No. 19a

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

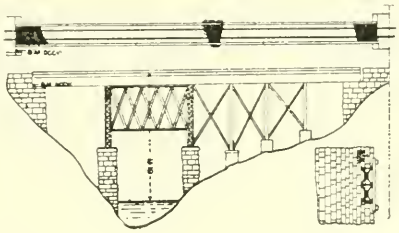
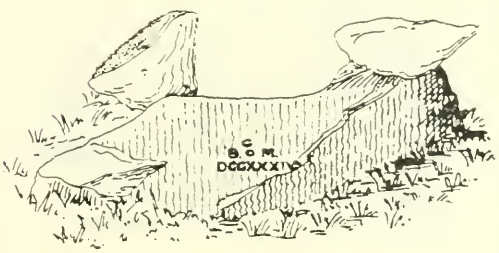
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
674	Cross cut in top of south-west corner of concrete pier immediately north of turn-table of iron road bridge over Royal Narrows..	721·91	722·26
	ATHERLEY JUNCTION.		
			
DCLXXXVII.	Chisel line in end of copper plug driven horizontally into north end of base of west face of solid rock 60 feet west of main track and opposite mile post 94–133.....	729·65	729·99
	LONGFORD.		
			
DCCXXV.	Chisel line in end of copper plug driven horizontally into stone in second course from top, east face of north abutment of G.T.R. bridge over east branch of Severn river south of.....	724·09	724·42
	WASHAGO.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

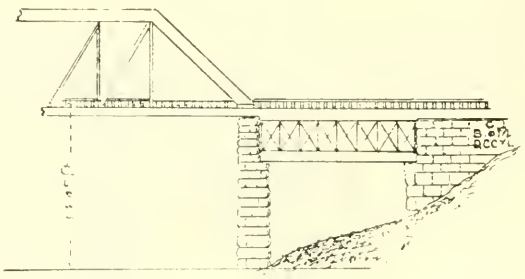
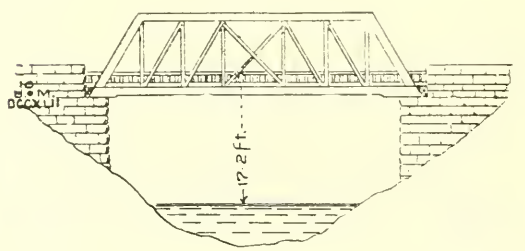
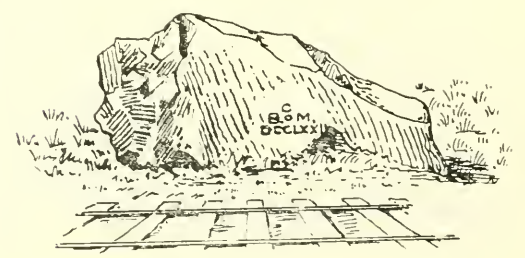
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCXXIII.	Chisel line in end of copper plug driven horizontally into west face, top stone west end of north abutment of G.T.R. bridge over west branch of Severn river, on lot 10, con. XV, township of North Orillia.....	729·15	729·47
	COUNTY OF SIMCOE.		
			
DCCXIX.	Chisel line in end of copper plug driven horizontally into second course from top, south face of north abutment, west side of track of G.T.R. bridge over Kashabagamog river, lot 21, con. VI., township of	715·74	716·05
	MORRISON.		
			
DCCXII.	Top of copper plug driven perpendicularly into solid rock at Mickle Dyment & Co.'s wharf, some 225 feet (over the water) west of end G.T.R. Muskoka wharf.....	746·03	746·32
	GRAVENHURST.		
			

SESSIONAL PAPER No. 19a

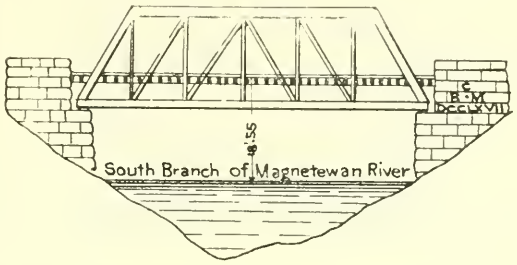
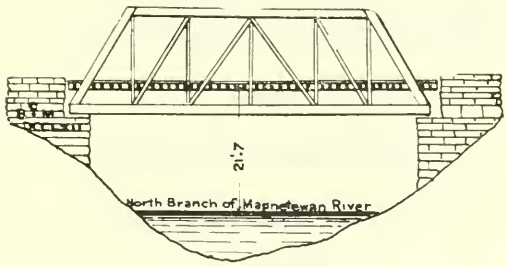
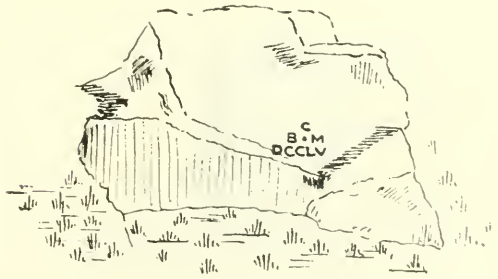
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCVI.	Chisel line in end of copper plug driven horizontally into 3rd course from top, north face of east end of south abutment of G.T.R. bridge over south branch of Muskoka river, on lot 2, con. XIII, township of Draper	797·02	797·29
	DRAPER.		
			
692	Cross cut on coping of seat, south side of west abutment of steel bridge over Muskoka river (87 feet east of track) at foot of Thomas street	807·78	808·05
	BRACEBRIDGE.		
DCCXXXIV.	Chisel line in end of copper plug driven horizontally into west face of solid rock 8·7 feet east of track and 140 feet north of centre of crossing at station of	1,037·57	1 037·80
	UTTERSON.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCXL.	Chisel line in end of copper plug driven horizontally into 2nd course from top, south end of west side of south abutment of G.T.R. bridge over Narrows, between Lakes Vernon and Fairy, at	964·71	964·92
	HUNTSVILLE.		
			
DCCXLII.	Chisel line in end of copper plug driven horizontally into 4th course from top, south end, east side of south abutment of G.T.R. bridge over Big East river, township of.....	954·10	954·30
	CHAFFEY.		
			
DCCLXXI.	Chisel line in end of copper plug driven horizontally in solid rock 6·8 feet east of track, 155 feet north of semaphore and 65 feet north of crossing.....	1,082·82	1,082·99
	SCOTIA JUNCTION.		
			

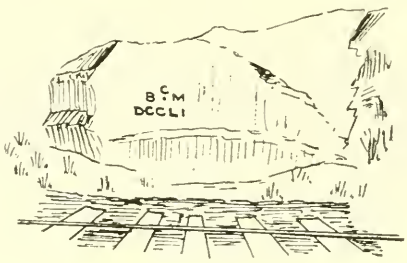
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCLXVII.	Chisel line in end of copper plug driven horizontally in 4th course from top, east face of north abutment of G.T.R. bridge over south branch of Magnetewan river.....	981·23	981·39
	KATRINE.		
			
DCCLXII.	Chisel line in end of copper plug driven horizontally in 6th course from top, north end of west face of north abutment of G.T.R. bridge over Magnetewan river.....	978·57	978·71
	BURK'S FALLS.		
			
DCCLV	Chisel line in end of copper plug, driven horizontally in east face of solid rock, 18·2 feet west of track and 435 feet north of mile post, 46–181.....	1,094.57	1,094.69
	SUNDRIDGE.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

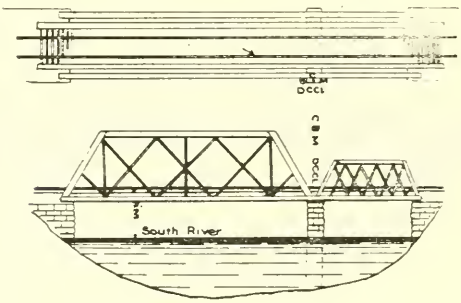
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCLI	Chisel line in end of copper plug, driven horizontally in solid rock, 8·25 feet west of track, 189 feet north of first semaphore north of station at	1,156.75	1,156.85

SOUTH RIVER.



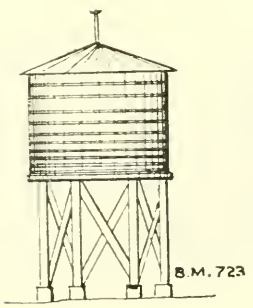
DCCL	Chisel line in end of copper plug, driven perpendicularly into north end of coping seat, east side of north abutment of G.T.R. bridge over South river	1,152.95	1,153.05

SOUTH RIVER.

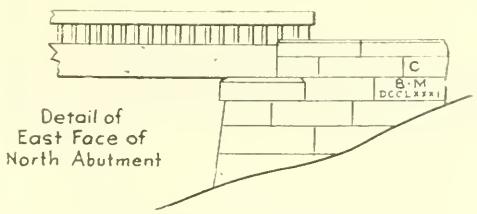
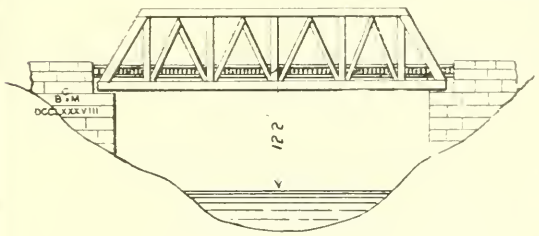
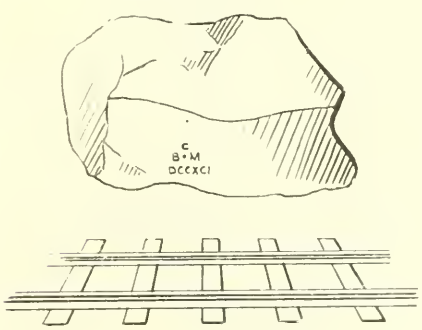


723	Cross cut in southwest corner of steel covering of cement base first pillar from south front of watertank, 9·2 feet east track, and 50·4 feet northeast of mile post 200—27	1,027.30	1,027.37

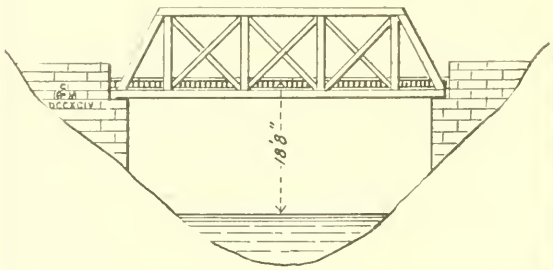
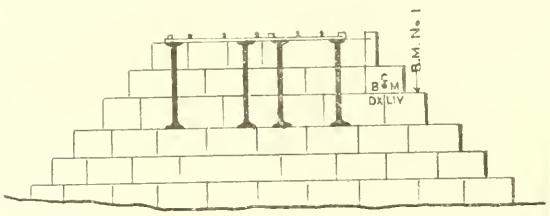
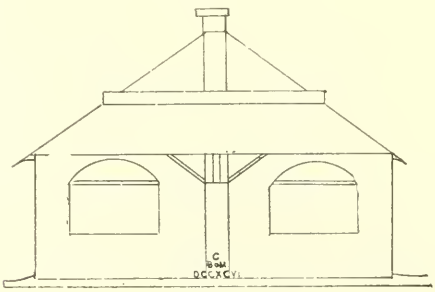
TROUT CREEK.



DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Instrumental.	Elevations. Adjusted.
DCCLXXXI	Chisel line in end of copper plug, driven horizontally in third course from top, east face of south abutment of G.T.R. bridge over McGuines brook.....	852.21	852.26
	POWASSAN.		
			
DCCLXXXVIII	Chisel line in end of copper plug, driven horizontally in fourth course from top, east face of south abutment of G.T.R. bridge over Wistawasing brook.....	739.51	739.54
	POWASSAN.		
			
DCCXCI	Chisel line in end of copper plug, driven horizontally in solid rock, 8·95 feet west of track, and 129 feet northwest of semaphore south of station of.....	675.88	675.90
	CALLENDER.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

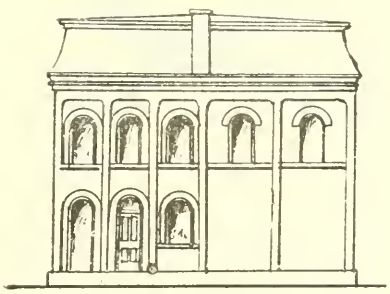
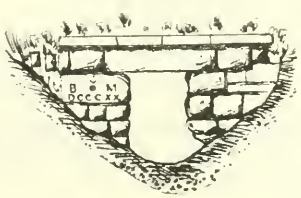
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCXCIV	Chisel line in end of copper plug, driven horizontally in third course from top, east face of south abutment of G.T.R. bridge over Rivière à la Vase	673.16	673.17
	NIPISSING JUNCTION.		
			
DXLIV	Chisel line in end of copper plug, driven horizontally in second course from top, west end of south abutment of bridge over Chippewa creek	650.71	650.71
	Inside edge of coping of fourth altar step, west end of south abutment of bridge over Chippewa creek	646.06	646.06
	NORTH BAY.		
			
DCCXCVI	Chisel line in end of copper plug, driven horizontally in cut stone on east face of station at	663.19	663.19
	NORTH BAY.		
			

ROUSES' POINT TO MONTREAL.

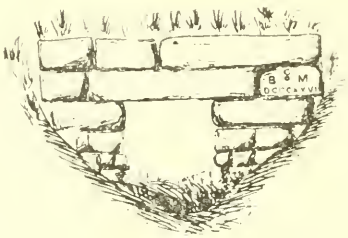
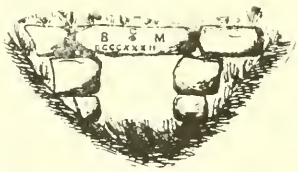
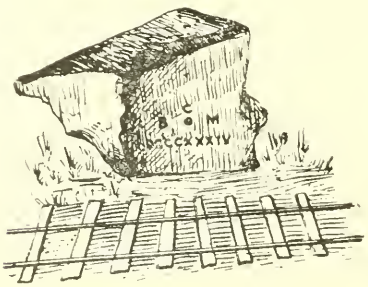
VIA LACOLLE JC., HOWICK JC., VALLEYFIELD, COTEAU JC. AND LACHINE.

DESCRIPTIVE LIST OF MOST IMPORTANT PERMANENT BENCH MARKS.

Datum: Mean Sea Level, Atlantic Ocean at New York.

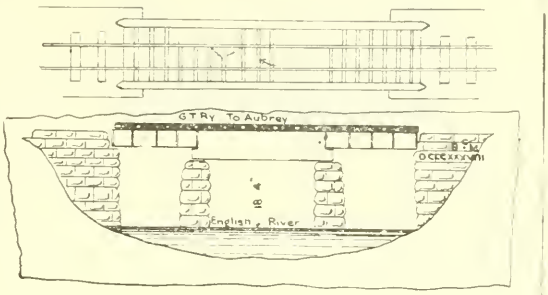
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
B. M. +	+ Top of stone plinth, 20·6 feet from northeast corner, 1½ feet above ground, north end of the Chapman building, occupied by Wallace & Rosemyer.....	107.96	107.96
	Rouses' Point, N. Y.		
			
DCCCXX	Copper plug, driven horizontally into third course from top east end of north face of small culvert north side of track	161.84	161.89
	Lacolle, P. Q.		
			

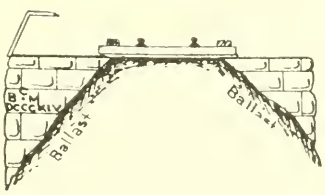
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

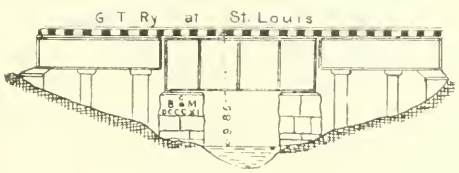
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCCXXVII	Copper plug driven horizontally into second course from top, west end of north face of small culvert, 480 feet west of mile post 17	223.53	223.61
	HENRYSBURG, P. Q.		
			
DCCCXXXII	Copper plug driven horizontally into centre of top stone, south face of small culvert, south side of track and 162 feet west of mile post 22	179.84	179.95
	JOHNSON'S, P. Q.		
			
DCCCXXXIV	Copper plug driven horizontally into solid rock, 9 feet south of track and 81 feet west of mile post 26	195.08	195.21
	HOLTON, P. Q.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

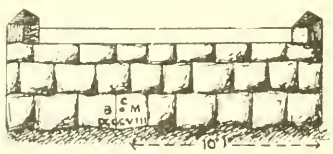
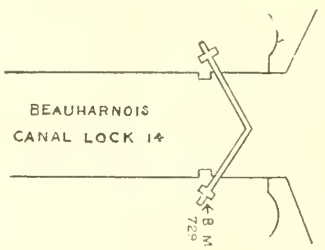
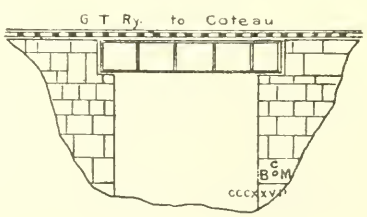
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCCXXXVIII	Copper plug driven horizontally into second course from top, south face of east abutment of G.T.R. bridge over Norton brook	138.00	138.16
	AUBREY, P. Q.		
DCCCXIV	Copper plug driven horizontally into third course from top, west face of north end of west abutment of G.T.R. bridge over Chateauguay river	129.25	129.45
	ST. LOUIS, P. Q.		
DCCCXI	Copper plug driven horizontally into first course from top, north face of north pier east end of G.T.R. bridge over St. Louis river	129.08	129.31
	ST. LOUIS, P. Q.		





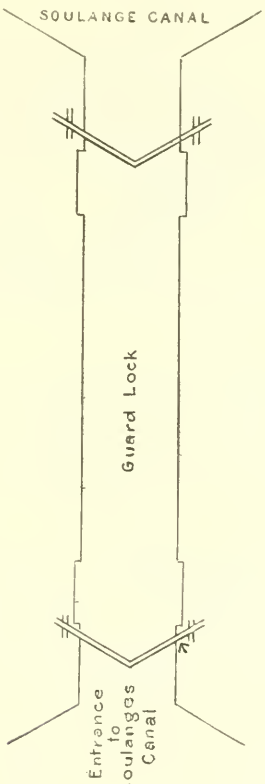
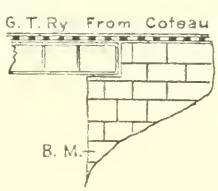


DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

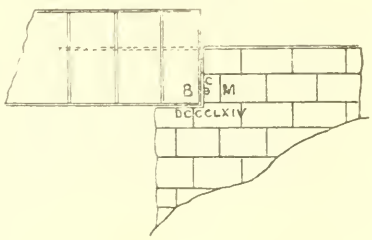
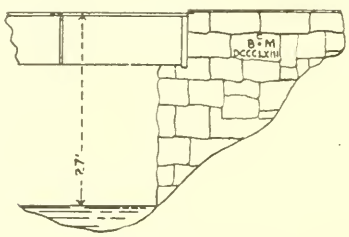
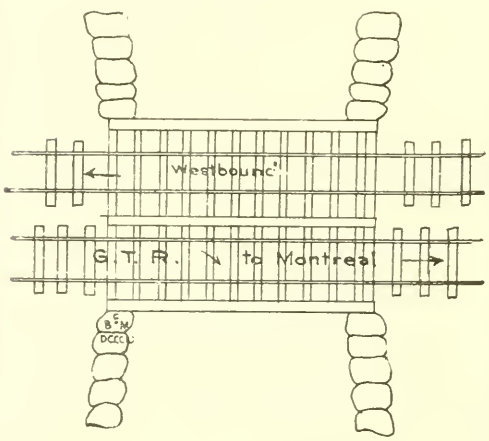
Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCCVIII	Copper plug driven horizontally into base course, centre of south face of sluice portal, north side of Beauharnois canal, 1¼ miles east of lock 14	143.44	143.71
	VALLEYFIELD P. Q.		
			
729	+ Cross cut on strap 6 inches from heel post, north end of upper gates of lock 14 of Beauharnois canal	154.29	154.57
	VALLEYFIELD P. Q.		
			
CCCCXXVIII	Copper plug driven horizontally into base of east face of north abutment of overhead crossing of road along north side of canal	160.85	161.17
	SOULANGES, P. Q.		
			

SESSIONAL PAPER No. 19a

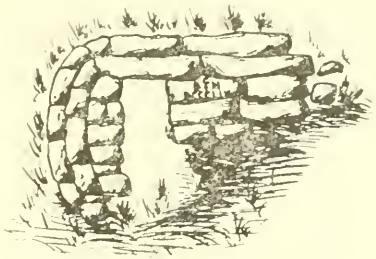
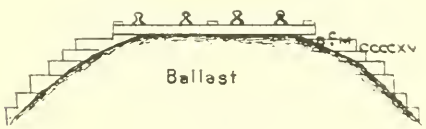
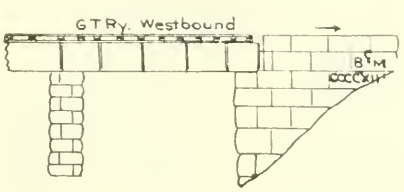
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations	
		Instrumental.	Adjusted.
S.W. coping.	Coping 6 inches from heel post south end of upper gates of lock 1, Soulanges canal	157.99	158.30
	SOULANGES, P. Q.		
			
47	Iron bolt driven horizontally into southwest corner of north face of south abutment of G. T. R. overhead crossing of road along south side of Soulanges canal	160.99	161.30
	SOULANGES P. Q.		
			

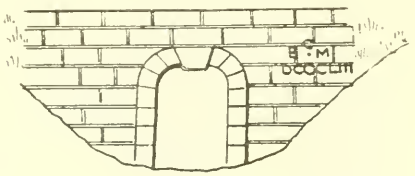
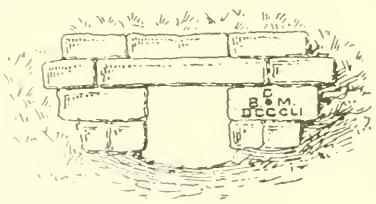
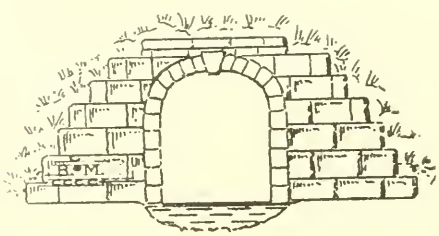
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCCLXIV	Copper plug driven horizontally into top course, west face of down stream end of east abutment of G.T.R. bridge over Delisle river	158.83	159.14
	COTEAU P Q.		
			
DCCCLXIII	Copper plug driven horizontally into second course from top, centre of up stream face of west abutment of G.T.R. bridge over Riviere Rouge	157.74	158.05
	RIVIÈRE ROUGE, P. Q.		
			
DCCCLX.	Copper plug driven horizontally into lower stone of south face of first altar step of west ballast wall of beam culvert, 784 feet west of mile post 31½ from Montreal	149.59	149.91
	ST. DOMINIQUE, P. Q.		
			

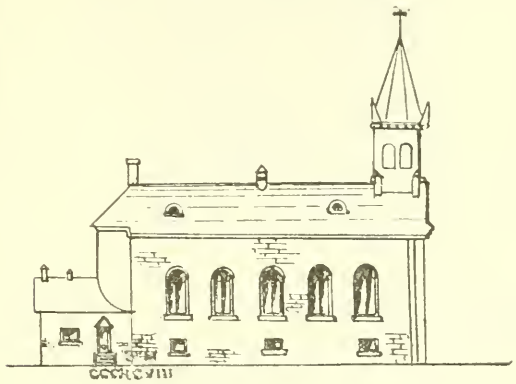
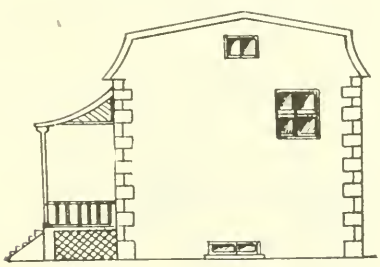
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCCLIX	Copper plug driven horizontally into third course from top, west end of north face of G. T. R. culvert, 193 feet east of mile post, 26½ miles from Montreal	118.77	119.10
	CEDARS, P. Q.		
			
CCCCXV.	Copper plug driven horizontally into west face of top course, south end of west abutment of G. T. R. bridge over Ottawa river	88.30	88.61
	VAUDREUIL, P. Q.		
			
CCCCXIII	Copper plug driven horizontally into second course from top, west end of north face of west abutment of G. T. R. bridge over channel east end of Ile Perrot	92.01	92.33
	ILE PERROT, P. Q.		
			

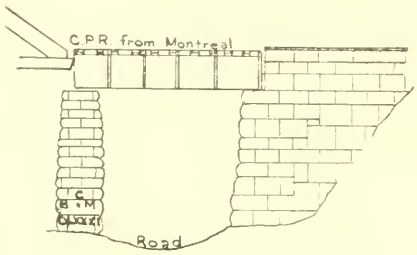
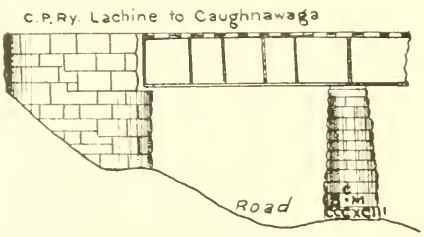
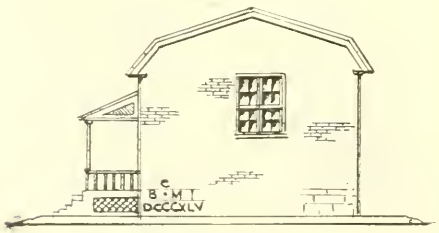
DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
DCCCLIII.	Copper plug driven horizontally into third course from top, east end of south face of C.P.R. arched culvert, opposite G.T.R. mile post 17.....	83.66	83.98
	BEAUREPAIRE, P. Q.		
			
DCCCLI.	Copper plug driven horizontally into third course from top east end of north face of G.T.R. culvert 745 feet south of mile post 15.....	96.62	96.93
	BEACONSFIELD, P. Q.		
			
CCCCI.	Copper plug driven horizontally into second course from bottom, south end of west ballast wall of arched culvert, south side of G.T.R., and 220 feet west of Valois station.....	73.86	74.16
	VALOIS, P. Q		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
CCCXCVIII.	Copper plug driven horizontally into first cut stone above ground, one foot from rear end of west face of Dorval R. C. church..	93.55	93.85
	DORVAL, P. Q.		
			
CCCXCVI.	Copper plug driven horizontally into first cut stone above ground, southeast corner of double stone house, second west of 34th avenue, along Lachine road.....	79 20	79.49
	LACHINE WHARF, P. Q.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Instru- Instru-	Adjusted.
DLXXXI.	Copper plug driven horizontally into second course above ground, west face of pier, 15 feet, south of south side of Lachine canal (C.P.R. swing bridge	74.53	74.81
	LACHINE, P. Q.		
			
CCCXCIII	Copper plug driven horizontally into second course above ground, southwest face of first pier, Lachine end of C.P.R. bridge over St. Lawrence river	93.85	94.13
	LACHINE, P. Q.		
			
DCCCXLV.	Copper plug driven horizontally into stone foundation, 18 inches from front, south gable of John Duffy's brick cottage, 18·7 feet north of track, east side of St. Philippe street	63.86	64.12
	ST. HENRI, P. Q.		
			

DESCRIPTIVE List of most Important Permanent Bench Marks—*Continued.*

Bench Marks.	Description and Location.	Elevations. Instrumental.	Elevations. Adjusted.
DCCCXLVI.	Copper plug driven horizontally into second course above ground, 14·85 feet from east end of stone front of St. Cunégonde R. C. church.	55.54	55.80
	MONTREAL, P. Q.		
DCCCXLVII	Copper plug driven horizontally into second course above ground, 6.6. feet from west end of north face of G. T. R. freight shed nearest to tracks, at Mountain street crossing.	46.69	46.95
	MONTREAL, P. Q.		
DC.	Copper plug driven horizontally into base, south face of west end of guard wall, south abutment of Curran bridge over Lachine canal at Wellington street	54.66	54.90
	MONTREAL, P. Q.		

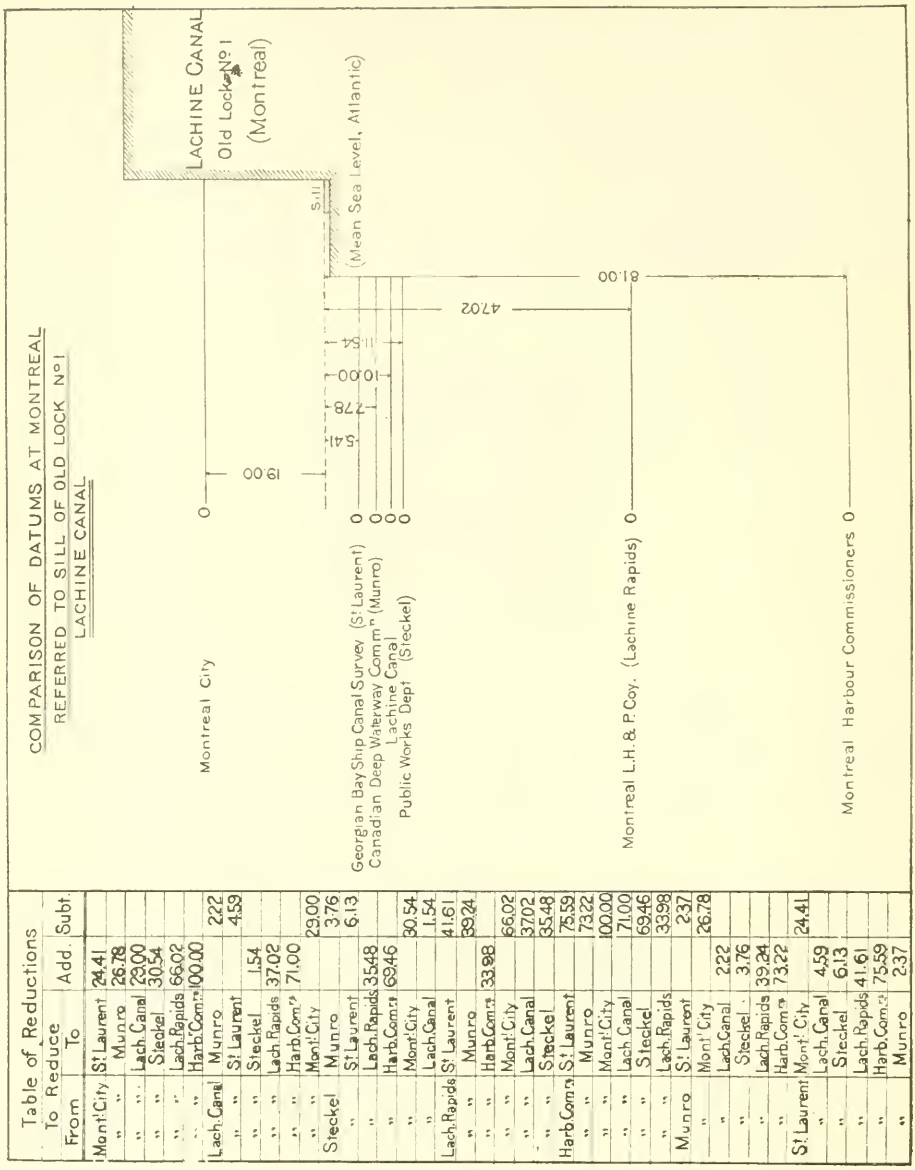


Table of Reductions			
To Reduce		Add.	Subt.
From	To		
Mont'l City	St Laurent	24.41	
" "	Munro	26.78	
" "	Lach. Canal	29.00	
" "	Steckel	30.54	
" "	Lach. Rapids	66.02	
" "	Harb. Com.rs	100.00	
Lach. Canal	Munro		2.22
" "	St Laurent		4.59
" "	Steckel	1.54	
" "	Lach. Rapids	37.02	
" "	Harb. Com.rs	71.00	
" "	Mont'l City		29.00
Steckel	Munro		3.76
"	St Laurent		6.13
"	Lach. Rapids	35.48	
"	Harb. Com.rs	69.46	
"	Mont'l City		30.54
"	Lach. Canal		1.54
Lach. Rapids	St Laurent		41.61
" "	Munro		39.24
" "	Harb. Com.rs	33.98	
" "	Mont'l City		66.02
" "	Lach. Canal		37.02
" "	Steckel		35.48
Harb. Com.rs	St Laurent		75.59
" "	Munro		73.22
" "	Mont'l City		100.00
" "	Lach. Canal		71.00
" "	Steckel		69.46
" "	Lach. Rapids		33.98
Munro	St Laurent		2.37
"	Mont'l City		26.78
"	Lach. Canal	2.22	
"	Steckel	3.76	
"	Lach. Rapids	39.24	
"	Harb. Com.rs	73.22	
St Laurent	Mont'l City		24.41
"	Lach. Canal	4.59	
"	Steckel	6.13	
"	Lach. Rapids	41.61	
"	Harb. Com.rs	75.59	
"	Munro	2.37	

ELEVATION of Sill of Old Lock No. 1, Lachine canal, Montreal, based on the difference of Elevations of certain Bench Marks, common to the Public Works Department's system of levels (Steckel's) and the Georgian Bay Ship Canal Survey's system of levels (St. Laurent.)

Bench Marks.	Steckel's.	St. Laurent's.	Difference.
S.E. cor. Montreal Custom House	55.1614	49.03	6.1314
S.E. cor. Examining Warehouse, Montreal	55.0998	48.98	6.1198
S.W. face, abutment, C.P.R. bridge, Lachine	99.9894	93.85	6.1394
Lachine R.C. Church	88.9787	82.87	6.1087
B.M. CXLI, St. Lambert	55.54	49.38	6.1600
B M (C P R) M	47.4196	41.27	6.1496
			36.8089
Mean Difference			6.1348
Elevation of Sill, Old Lock No. 1, (Steckel)			11.54
Difference of Elevation of Datums (Steckel–St. Laurent)			6.13
Elevation of Sill Old Lock No. 1 (St. Laurent)			5.41

PRECISE LEVELLING.

ROUSES' POINT TO CORNWALL VIA ST. JOHN, VICTORIA BRIDGE, LACHINE, VAUDREUIL AND COTEAU LANDING.

COMPLETE LIST OF BENCH MARKS AND ELEVATIONS. DATUM, MEAN SEA LEVEL, ATLANTIC OCEAN AT NEW YORK.

Bench Marks.	Description and Location.	Elevations.	
		Instrumental.	Adjusted.
+	20·6 feet from N.E. corner of Chapman building, Rouses' Point, New York	107·96	107·96
	Base of rail, D. & H. Ry., at Chapman St. crossing, Rouses' Point	129·25	129·25
	Base of rail, D. & H. Ry., Spratt St	123·15	123·15
	Base of rail, D. & H. Ry., Rouses' Point station	122·48	122·48
DCI.	On N.E. corner of D. & H. Ry station, Rouses' Point	123·75	123·76
	Base of rail, D. & H. Ry., at crossing of Rutland Ry	120·31	120·31
639	+On boulder at boundary line, U.S.A. and Canada	113·39	113·41
	Base of D. & H. Ry., rail at boundary line, U.S.A. and Canada	116·37	116·39
B.W. 'A.'	Top of bronze cap of bench wall 'A' in boundary line	93·60	93·63
B.W. 'A.'	Cavity in bronze cap of bench wall 'A' in boundary line	93·56	93·59
B.W. 'A.'	Top of inside tube of bench wall 'A' in boundary line	101·55	101·59
B.W. 'A.'	Top of outside tube of bench wall 'A' in boundary line	102·68	102·72
DCII.	In W. face of S. abutment of G.T.R. culvert, Lacolle, P.Q.	109 28	109·31
	Base of G.T.R. rail, centre of G.T.R. culvert, Lacolle	113·57	113·59
	Base of G.T.R. rail at road crossing, Lacolle	117·33	117·35
	Base of G.T.R. rail at crossing of branch to Ottawa	130·42	130·45
	Base of G.T.R. rail at road crossing, Lacolle, P.Q.	131·12	131·15
	Base of G.T.R. rail at old G.T.R. station, Lacolle, P.Q.	131·99	132·02
	Base of G.T.R. rail, centre of bridge, over Lacolle river	131·84	131·87
DCIII.	On W. end of N. abutment of bridge over Lacolle river	129·92	129·95
640	+On W. end of N. abutment of bridge over Lacolle river	132·17	132·20
641	+On W. end of N. abutment of bridge over Lacolle river	132·06	132·09
	Base of G.T.R. rail, at road crossing, Lacolle, P.Q.	134·64	134·67
	Base of G.T.R. rail, at road crossing, Lacolle, P.Q.	145·88	145·92
	Base of G.T.R. rail, at road crossing, Lacolle, P.Q.	141·07	141·11
DCIV.	On E. end of N. abutment of G.T.R. culvert, Lacolle	137·06	137·10
	Base of G.T.R. rail, centre of G.T.R. culvert, Lacolle	139·51	139·55
	Base of G.T.R. rail at road crossing culvert, Lacolle	139·26	139·30
IX.	On N.E. corner of L. Goudreau's house, Lacolle	128·61	128·65
	Base of G.T.R. rail, at road crossing, Stottsville, P.Q.	161·74	161·79
	Base of G.T.R. rail at St. Valentin de Stottsville station	150·06	150·12
DCV.	On S. side of Stottsville R.C. church	157·44	157·50
DCVI.	On E. end of S. abutment of G.T.R. culvert, Stottsville	146·41	146·47
	Base of G.T.R. rail, centre of G.T.R. culvert, Stottsville	149·85	149·91
642	+At S.E. corner of G.T.R. culvert, Stottsville	145·79	145·85
VIII.	On S. gable of C. Boudreault's house, St. Paul	105·80	105·87
DCXIII.	On front of St. Paul de l'Ile aux Noix R.C. church	109·54	109·61
B.W. 'B.'	Top of bronze cap of bench well 'B.' St. Paul	97·04	97·11
B.W. 'B.'	Cavity in bronze cap of bench well 'B.' St. Paul	97·03	97·10
B.W. 'B.'	Base of G.T.R. rail at road crossing, Stottsville	158·13	158·19
DCXVII.	On S.E. corner of G.T.R. arched culvert, Stottsville	150·41	150·48
643	+On S.E. corner of G.T.R. arched culvert	149·82	149·89
	Base of G.T.R. rail at road crossing, Stottsville	160·18	160·25
	Base of G.T.R. rail at Girard station	152·20	152·28
	Base of G.T.R. rail at Girard station crossing	151·96	152·04
644	+On boulder 24 feet E. of track, opposite Girard's house	149·09	149·17
	Base of G.T.R. rail at road crossing	144·81	144·90
	Base of G.T.R. rail at Grande Ligne station	141·72	141·81
	Base of G.T.R. rail at Grande Ligne crossing	141·58	141·67
DCVIII.	On N.W. corner of Grande Ligne station	141·74	141·83
DCIX.	On stone front of St. Blaise de Grande Ligne R.C. church	141·69	141·78
VI.	On W. gable of M. Robert's house foot of Grande Ligne road	107·58	107·68
VA.	On N. wall of Lucien Menard's house, St. Johns	117·81	117·93
IV.	On N. gable of F. Pinsonnault's house, St. Johns	110·76	110·89
DCX.	On N.E. corner of G.T.R. culvert, St. Johns	119·28	119·40
	Base of G.T.R. rail, centre of culvert, St. Johns	124·58	124·70

ROUSES' POINT to Cornwall, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
DCXI.	On S.W. corner of G.T.R. culvert, St. Johns	104·66	104·78
	Base of G.T.R. rail, centre of culvert, St. Johns	107·57	107·69
	Base of G.T.R. rail at road crossing, St. Johns	105·11	105·23
DCXII.	On N. base of G.T.R. tank, St. Johns	123·73	123·85
B.W. 'C.'	Top of bronze cap of bench well 'C.' St. Johns	101·76	101·89
	Cavity in bronze cap of bench well 'C.'	101·74	101·87
	Base of G.T.R. rail, W. side of St. Johns station	120·63	120·75
	Base of G.T.R. rail, E. side of St. Johns station	120·20	120·32
III.	On S. gable of Montgomery's house, St. Johns	116·80	116·92
DXCVII.	On W. curved wall of lock 1, St. Johns	96·45	96·59
I.	On N.E. corner of T. Nolin's house, St. Johns	106·27	106·41
633	+On granolithic pavement, N.W. end of G.T.R. station	121·57	121·69
	Base of G.T.R. rail, crossing of St. John street	117·38	117·51
	Base of G.T.R. rail, crossing of Bernier St.	110·48	110·61
	Base of C.P.R. rail at St. Johns station	116·36	116·50
	Base of G.T.R. rail at C.P.R. crossing, St. Johns	113·97	114·10
	Base of G.T.R. rail, centre of culvert 423 feet N. of mile 26	114·63	114·76
DXCVI.	On E. end of S. wall, culvert 423 feet N. of mile 26	107·37	107·50
	Base of rail crossing 400 feet N. of mile 24½	131·90	132·04
	Base of rail centre of culvert 575 feet N. of mile 22	126·73	126·88
DXCV.	On S. end of N. abutment culvert 575 feet N. of mile 22	120·67	120·82
	Base of rail crossing 625 feet N. of mile 22	126·80	126·95
	Base of rail centre of culvert 565 feet S. of mile 21	123·23	123·38
DXCIV.	On W. end of N. wall of culvert 565 feet S. of mile 21	118·38	118·53
	Base of G.T.R. rail, Lacadie station	116·87	117·03
	Base of G.T.R. rail, Lacadie station crossing	116·76	116·92
	Base of G.T.R. rail, centre of bridge over Lacadie river	116·17	116·33
DXCIII.	On W. end of N. abutment, bridge over Lacadie river	110·37	110·53
	Base of G.T.R. rail, crossing 445 feet S. of mile 19½	120·22	120·38
	Base of G.T.R. rail, culvert 280 feet N. of mile 17½	109·10	109·27
DXCII.	On E. end of S. wall, culvert 280 feet N. of mile 17½	104·13	104·30
	Base of rail crossing, 850 feet N. of mile 17	94·10	94·27
	Base of rail crossing, 1,000 feet N. of mile 16	77·03	77·21
	Base of rail, centre of culvert, 875 feet S. of mile 14	54·26	54·45
DXCI.	On E. end of S. wall, culvert 875 feet S. of mile 14	49·38	49·57
	Base of G.T.R. rail, centre of culvert, 216 feet N. of mile 13½	51·19	51·38
DXC.	On W. end of N. abutment of culvert, 216 feet N. of mile 13½	44·29	44·48
	Base of rail, centre of culvert, 1,570 feet N. of mile 13	51·48	51·68
DLXXXIX.	On E. abutment of culvert, 1,570 feet N. of mile 13	48·82	49·02
	Base of G.T.R. rail, at crossing, 1,335 feet S. of mile 12	53·11	53·31
	Base of G.T.R. rail at Brosseau station	59·05	59·25
	Base of G.T.R. rail at crossing, 1,320 feet E. of mile 11½	60·41	60·61
	Base of G.T.R. rail opposite B.M. DLXXXVIII, Brosseau	62·29	62·50
DLXXXVIII.	On E. end of S. wall of culvert, 1,125 feet N. of mile 10½	58·15	58·36
	Base of G.T.R. rail opposite B.M. DLXXXVII	61·75	61·96
DLXXXVII.	On W. end of S. wall of culvert, 270 feet S. of mile 9½, Brosseau	58·36	58·57
	Base of G.T.R. rail, opposite B.M. 632, St. Lambert	62·17	62·39
632	+On boulder 17 feet W. of track, 100 feet N. of mile 8	61·22	61·44
	Base of G.T.R. rail, centre of crossing Victoria St.	69·20	69·43
DLXXXVI.	On W. abutment of G.T.R. crossing of Victoria street	71·96	72·19
	Base of G.T.R. rail at St. Lambert station	73·95	74·18
	Base of G.T.R. rail, centre of overhead crossing, Lapriarie Rd.	66·12	66·35
CXLI.	On W. wall of subway under G.T.R., Laprairie Rd.	49·38	49·61
631	+On stone base of steel arch, St. Lambert end, Victoria bridge	68·38	68·61
DLXXXV.	On stone base of steel arch, St. Lambert end, Victoria bridge	67·55	67·78
630	On S. stone, first steel arch, entrance to Victoria bridge	67·97	68·21
L.	On S. end of E. face of Longueuil ferry subway	37·76	38·02
M.	On S. end of E. face of Beaudry St. subway	41·27	41·52
N.	On S.E. corner of Montreal Custom House	49·03	49·28
O.	On front of Montreal Examining Warehouse	48·98	49·23
638	+On coping E. side of old lock, Lachine Canal	36·94	37·19
637	On coping E. side of new lock, Lachine Canal	36·46	36·71
636	+On coping S. side of Windmill Pt. basin	41·97	42·22
635	+On coping S. side of Windmill Pt. basin	42·00	42·25
DLXXXIV.	On S. stone, first steel arch, entrance to Victoria bridge	67·18	67·42
	Base of G.T.R. rail at Pt. St. Charles station, Montreal	52·54	52·79
	Base of G.T.R. rail at Herbernia St. crossing, Montreal	49·85	50·10
	Base of G.T.R. rail at Charlevoix St. crossing, Montreal	51·76	52·01
	Floor level, centre of Curran bridge, Montreal	55·88	56·14
DC.	On W. end of S. abutment of Curran bridge, Montreal	54·63	54·90
634	+On E. end of S. coping of lock 3, Montreal	58·61	58·87
DCXIX.	On E. end of S. abutment of St. Gabriel bridge, Montreal	63·51	63·76
	Floor level of St. Gabriel St. bridge over canal, Montreal	63·58	63·84
DXCVIII.	On S. abutment of Brewster bridge over canal, Montreal	64·24	64·49
	Floor level of Brewster bridge over canal, Montreal	65·07	65·32
DLXXXIII.	On W. side of G.T.R. bridge over canal, Montreal	61·47	61·72
629	+On lower end of S. coping of lock 4, Montreal	67·58	67·84
DLXXXII.	On guard wall S. end of Cote St. Paul bridge, Montreal	72·74	73·00
628	+On guard wall S. end of Cote St. Paul bridge, Montreal	72·08	72·34

SESSIONAL PAPER No. 19a

Rouses' Point to Cornwall, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Road level S. end of Cote St. Paul bridge, Montreal	71·76	72·02
627	+On boulder S. side of Lachine canal, Montreal	69·78	70·04
626	+On boulder S. side of Lachine canal, Montreal	71·23	71·50
625	+On boulder S. side of Lachine canal, Montreal	71·23	71·50
DLXXXI.	On W. side of S. pier of C.P.R. bridge over canal, Lachine	74·53	74·81
	Base of C.P.R. rail at Highlands station, Lachine	115·90	116·11
	Base of C.P.R. rail at overhead crossing, Lachine	121·92	122·18
CCCXCIII.	On W. side of first pier of C.P.R. bridge at Lachine	93·85	94·13
	Lower Lachine road level opposite tollgate	75·37	75·62
535	+On coping of new lock 5, Lachine, P.Q.	74·42	74·71
536	+On coping of old lock 5, Lachine, P.Q.	74·43	74·72
CCCXCIV.	On E. end of stone front of R.C. church, Lachine, P.Q.	82·87	83·16
CCCXCV.	On W. side of post office, Lachine, P.Q.	76·29	76·58
	Base of G.T.R. rail at Lachine wharf station	74·53	74·82
536½	Brass headed nail on Lachine wharf	72·04	72·33
	Base of G.T.R. rail at Lachine station	80·30	80·59
536¾	S.W. corner of G.T.R. culvert	85·47	85·77
	Base of G.T.R. rail, centre of culvert, Lachine, P.Q.	86·08	86·38
CCCXCVI.	On S.E. corner of McRea's double house, Lachine, P.Q.	79·18	79·49
CCCXCVII.	On N.W. corner of Fulton's brick house, Lachine, P.Q.	76·67	76·97
537	On root of elm tree, foot of avenue to Dorval R.C. church	82·03	82·34
CCCXCVIII.	On rear corner of W. face of Dorval R.C. church	93·53	93·85
538	Brass headed nail on root of elm tree opposite Houde's house	83·40	83·71
CCCXCIX.	On W. face of A. G. Legault's residence, Dorval	83·56	83·87
CCCC.	On W. face of Leon Denis' residence, Valois, P.Q.	82·38	82·70
	Base of C.P.R. rail at Valois station crossing	89·10	89·42
	Base of G.T.R. rail at Valois station crossing	89·43	89·75
CCCCI.	On S. face of G.T.R., arched culvert, Valois, P.Q.	73·82	74·16
CCCCII.	On S.E. corner of T. Legault's house, Pte. Claire	80·61	80·94
539	Brass headed nail on Pte. Claire wharf	75·82	76·15
CCCCIII.	On S.E. corner of Pte. Claire R.C. church	83·95	84·28
CCCCIV.	On S.E. corner of priest's residence, Pte. Claire	83·80	84·13
CCCCV.	On W. face of Alfred Dagenais' residence, Pte. Claire	82·07	82·41
CCCCVI.	On S.E. face of John Angeh's residence, Pte. Claire	84·79	85·14
CCCCVII.	On E. face of Judge Ouimet's residence, Ste. Anne de Bellevue	88·78	89·14
CCCCVIII.	On W. face of H. Lanctot's house, Ste. Anne de Bellevue	79·91	80·28
	Base of G.T.R. rail at Ste. Anne de Bellevue station	121·19	121·54
	Base of C.P.R. rail at Ste Anne de Bellevue station	114·07	118·07
	Peak of E. abutment of C.P.R. bridge over Ottawa river	111·66	112·03
	Base of C.P.R. rail, centre of bridge over Ottawa river	111·05	111·43
	Base of G.T.R. rail, centre of bridge over Ottawa river	110·30	110·68
CCCCXII.	On coping N.E. corner of G.T.R. bridge over Ottawa river	105·49	105·87
540	Brass headed nail, S.E. corner of Lalonde's wharf	73·76	74·13
CCCCIX.	On E. face of first pier of G.T.R. bridge over Ottawa river	81·85	82·22
CCCCX.	On N.W. face of priest's house, Ste. Anne de Bellevue	88·75	89·12
CCCCXI.	On S.W. corner of R.C. church, Ste. Anne de Bellevue	86·69	87·06
541	On S.W. corner of new lock, Ste. Anne de Bellevue	81·45	81·82
541¼	On S.W. corner of new lock, Ste. Anne de Bellevue	81·45	81·82
	Upper sill of new lock, Ste. Anne de Bellevue	59·57	59·94
	Lower sill of new lock, Ste. Anne de Bellevue	57·66	58·03
	Lower sill of old lock, Ste. Anne de Bellevue	60·66	61·03
541½	Brass headed nail on end of pier, entrance to locks	77·97	78·34
CCCCXIII.	Base of C.P.R. rail, W. end of bridge over Ottawa river	106·19	106·57
	On N. face of W. abutment of G.T.R. bridge on Ile Perrot	91·96	92·33
	Base of G.T.R. rail, centre of bridge, on Ile Perrot	96·24	96·62
	Base of C.P.R. rail, centre of bridge, on Ile Perrot	94·79	95·17
CCCCXIV.	On S. end of E. abutment of G. T. R. bridge at Vaudreuil	91·89	92·27
	Base of G.T.R. rail, E. end of G. T. R. bridge at Vaudreuil	93·12	93·51
	Base of G.T.R. rail, centre of G.T.R. bridge, at Vaudreuil	91·53	91·92
	Base of G.T.R. rail, W. end of G.T.R. bridge at Vaudreuil	89·51	89·96
CCCCXV.	On S. end of west abutment of G.T.R. bridge at Vaudreuil	88·24	88·61
	Base of C.P.R. rail at Vaudreuil station	86·07	86·40
	Base of G.T.R. rail at Vaudreuil station	84·76	85·09
	Base of G.T.R. rail at Vaudreuil village crossing	84·54	84·87
CCCCXVI	On S.W. corner of Foster's house, road to Cascades	84·66	85·05
	Coping, end of long pier, lower entrance to Soulanges canal	79·52	79·90
	Coping, end of light house pier, lower entrance to Soulanges canal	79·31	79·69
CCCCXVII.	On N. face of stairway wall of lock 1, Soulanges canal	80·55	80·93
	Coping opposite stairway wall of lock 1, Soulanges canal	78·51	78·89
	Coping opposite lower gates of lock 1, Soulanges canal	92·97	93·35
	Coping opposite upper gates of lock 1, Soulanges canal	92·96	93·34
CCCCXVIII	On N. face of stairway of lock 2, Soulanges canal	95·37	95·75
	Coping opposite stairway of lock 2, Soulanges canal	92·96	93·34
	Coping opposite lower gates of lock 2, Soulanges canal	116·45	116·83
	Coping opposite upper gates of lock 2, Soulanges canal	116·46	116·84
CCCCXIX	On N. face of stairway of lock 3, Soulanges canal	119·76	120·14
	Coping opposite stairway of lock 3, Soulanges canal	116·39	116·77
	Coping opposite lower gates of lock 3, Soulanges canal	139·93	140·31

ROUSES' POINT to Cornwall, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Coping opposite upper gates of lock 3, Soulanges canal. .	139·89	140·27
CCCCXX.	On N. face of stone block, lower side of bridge, Soulanges canal.	140·70	141·08
	Flooring, centre of bridge over Soulanges canal, St. Antoine road.	144·56	144·93
542	+On coping, upper end of N. abutment of bridge over canal	141·69	142·06
CCCCXXI	On N. face of stairway of lock 4, Soulanges canal.	142·02	142·39
	Coping opposite stairway of lock 4, Soulanges canal.	139·83	140·20
	Coping opposite lower gates of lock 4, Soulanges canal.	157·85	158·22
	Coping opposite upper gates of lock 4, Soulanges canal.	157·80	158·17
	Coping opposite upper gates north of lock 4, Soulanges canal .	157·76	158·13
CCCCXXII.	On E. face of N. abutment of canal bridge at St. Fereol road. .	156·86	157·22
	Flooring centre of Soulanges canal bridge at St. Fereol road .	160·79	161·15
CCCCXXIII.	On N.W. corner of Cedars R. C. church.	158·39	158·75
	Top step, opposite main entrance to Cedars R. C. church .	156·78	157·14
CCCCXXIV.	On E. face of N. abutment of canal bridge at St. Dominique road.	156·81	157·16
	Flooring centre of Soulanges canal bridge at St. Dominique road.	160·77	161·12
543	+On stone step of building opposite canal electric power house.	158·35	158·70
CCCCXXV.	On E. face of N. abutment of canal bridge at Emmanuel road.	156·53	156·87
	Flooring, centre of Soulanges canal bridge at Emmanuel road.	160·87	161·21
CCCCXXVI.	On E. face of N. abutment of canal bridge at River Rouge road.	157·41	157·75
	Flooring, centre of Soulanges canal bridge at River Rouge road	161·18	161·52
544	Iron bolt, rear end of Coteau du Lac R.C. church.	156·02	156·35
545	Top step, opposite main entrance to Coteau du Lac church .	157·12	157·45
CCCCXXVII.	On stone front of Coteau du Lac R.C. church.	158·48	158·81
CCCCXXVIII.	On E. face of G.T.R. overhead of road along N. side of canal.	160·85	161·17
546	Iron bolt on W. face of overhead crossing of road N. side of canal.	159·44	159·76
CCCCXXIX.	On stone block, lower end of bridge over canal.	158·76	159·07
547	Iron bolt, W. face of G.T.R. overhead crossing S. of canal. .	160·93	161·30
	Base of rail, crossing 3 miles E. of Coteau station.	158·90	159·21
624	On W. coping of S.abutment of highway bridge over Delisle river	158·40	158·71
DLXXIX.	On W. face of S. abutment of highway bridge over Delisle river	156·43	156·74
	Base of rail rear of Coteau station.	159·53	159·85
	Base of rail at Coteau station.	159·50	159·82
	Base of rail junction of branch to Ottawa.	159·40	159·72
DLXXVIII.	On S. end of E. abutment bridge 600 feet E. of St. Zotique station	154·65	154·97
623	Base of rail, N. end of W. abutment bridge 600 feet E. of St. Zotique station.	158·41	158·73
	Base of rail, centre of bridge, 600 feet E. of St. Zotique station	159·12	159·44
	Base of rail at St. Zotique station crossing.	158·78	159·10
	Base of rail at St. Zotique station. .	158·74	159·06
	Base of rail first crossing W. of St. Zotique station.	161·69	162·00
	Base of rail at River Beaudette station.	167·98	168·29
	Base of rail main crossing River Beaudette.	169·71	170·02
622	+On S. end of E. abutment, bridge over River Beaudette. . .	172·41	172·72
	Base of rail, centre of bridge over River Beaudette. .	172·14	172·45
DLXXVII.	On S. face of W. abutment, bridge over River Beaudette. . . .	169·45	169·76
	Base of rail at first crossing W. of River Beaudette.	173·78	174·09
	Base of rail at second crossing W. of River Beaudette.	167·51	167·82
	Base of rail centre bridge over Woods creek.	165·56	165·86
DLXXVI.	On S. face of W. abutment, bridge over Woods creek.	162·29	162·59
	Base of G.T.R. rail, third crossing W. of River Beaudette. . .	167·55	167·85
	Centre of bridge, Sutherland creek.	166·45	166·75
DLXXV.	On W. end of W. abutment of bridge, Sutherland creek.	163·05	163·35
621½	W. peak of S. coping of culvert, 800 feet W. of mile 48.	175·23	175·53
	Base of rail, centre of culvert, 800 feet W. of mile 48.	175·22	175·52
DLXXIV.	On S. end of W. wall of culvert, 800 feet W. of mile 48.	169·17	169·47
	Base of G.T.R. rail, opposite B.M. DLXXIII.	164·77	165·07
	Base of G.T.R. rail at Bainsville station.	173·06	173·36
DLXXIII.	On S. end of W. wall of culvert 140 feet E. of mile 50½.	159·27	159·57
	Base of rail, centre of culvert, E. of mile 51½.	163·44	163·74
DLXXII.	On W. wall of culvert, 1,075 feet E. of mile 51½.	157·17	157·47
	Base of G.T.R. rail, first crossing, E. of Lancaster station.	170·06	170·36
	Base of G.T.R. rail at Main street crossing.	163·74	164·04
	Base of G.T.R. rail, opposite Lancaster station.	163·26	163·56
DLXXI.	On N.E. corner of Lancaster station.	165·85	166·15
621¾	Top of plinth course N.W. corner of Lancaster station.	165·29	165·59
	Base of rail, first crossing W. of Lancaster station.	161·54	161·84
DLXX.	On S. end of W. abutment of bridge over Black river.	162·97	163·27
621⅞	+On S.E. coping of G.T.R. bridge over Black river.	165·62	165·92
	Base of G.T.R. rail, centre of bridge over Black river.	166·37	166·67
	Base of G.T.R. rail at road crossing, Summerstown.	166·14	166·44
	Base of G.T.R. rail at road crossing, Summerstown.	168·35	168·65
	Base of G.T.R. rail at road crossing, Summerstown.	169·41	169·71

SESSIONAL PAPER No. 19a

Rouses' Point to Cornwall, &c.—Complete List of Bench Marks, &c.—*Concluded.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
621½	E. peak, S. coping, W. wall of culvert at mile 57·2	169·95	170·25
	Base of rail, centre of culvert, 870 feet W. of mile 57	169·58	169·88
DLXIX.	On S.W. corner of culvert, 870 feet W. of mile 57	164·97	165·27
	Base of rail, opposite B.M. DLXVIII	173·20	173·50
DLXVIII.	On E. end of S. wall, culvert 1,050 feet E. of mile 58	168·72	169·02
	Base of rail at crossing, Summerstown	172·71	173·01
	Base of rail at crossing, Summerstown	176·44	176·74
621	+On boulder, N. of track, 65 feet E. of semaphore	183·14	185·44
	Base of rail at street crossing	176·64	176·94
	Base of rail opposite Summerstown station	182·71	183·01
	Base of rail opposite B.M. DLXVII	180·43	180·73
DLXVII.	On boulder, N. of railway, 1,070 feet W. of mile 59½	180·49	180·79
	Base of rail at road crossing, Summerstown	184·80	185·10
	Base of rail at road crossing, Summerstown	176·63	176·93
	Base of rail, centre of culvert at mile 62·6	176·11	176·41
620	+S.W. corner of culvert at mile 62·6	174·72	175·02
DLXVI.	On W. end of S. face of culvert, opposite mile 63	177·92	178·22
	Base of rail, culvert opposite mile 63	181·43	181·73
619¾	S.W. coping of G.T.R. culvert, mile 63	180·83	181·13
	Base of G.T.R. rail, crossing Summerstown	177·01	177·31
	Base of G.T.R. rail, crossing Summerstown	173·43	173·73
	Base of rail opposite B.M. DLXV, Summerstown	175·04	175·34
DLXV.	On S. end of E. wall of culvert 225·4 feet E. of mile 65	170·92	171·22
	Base of G.T.R. rail, opposite B.M. DLXIV	187·95	188·25
DLXIV.	On E. end of S. face of G.T.R. culvert	184·47	184·77
	Base of G.T.R. rail at Marlborough St. crossing	191·40	191·70
	Base of G.T.R. rail at Marlborough St. crossing	189·59	189·89
	Base of G.T.R. rail opposite B.M. 619¼	187·62	187·92
619¼	E. peak, S. coping, W. wall of G.T.R. culvert	187·71	188·01
	Base of G.T.R. rail opposite Cornwall station	192·17	192·47
619½	On N. face of Cornwall stone station	194·55	194·85
DLXII.	On S. face of Cornwall stone station	194·17	194·47
	Base of G.T.R. rail at Pill St. crossing, Cornwall	192·08	192·38
	Base of G.T.R. rail at road crossing, Cornwall	190·22	190·52
	Base of G.T.R. rail at road crossing	195·36	195·66
	Base of G.T.R. rail opposite B.M. DLXXX	199·97	200·27
DLXXX.	On N.W. corner of G.T.R. culvert, near Junction	196·08	196·38
	Base of N.Y. & O. Railway rail at Cornwall station junction	201·23	201·53
	Base of N.Y. & O. Railway rail at Cornwall station crossing	216·32	216·62
	Base of N.Y. & O. Railway rail at Cornwall station crossing	218·83	219·13
DLXI.	On N.E. face of first pier of N.Y. & O. Ry. bridge, Cornwall	165·36	165·66
'C.'	On upper course of N. wall of old lock 18, Cornwall	187·98	188·28
	Flooring, centre of bridge over canal at Augusta street	184·42	184·72
DLXIII.	Foot of stairway, leading of new lock 15, Cornwall	159·50	159·80
619	+On lower end of N. wall of new lock 15, Cornwall	166·85	167·15
'A.'	On lower end of S. wall of new lock 15, Cornwall	166·73	167·03
'B.'	On lower end of S. wall of old lock 15, Cornwall	162·59	162·89

VAUDREUIL TO NORTH BAY VIA RIGAUD, VANKLEEK HILL, OTTAWA, ARNPRIOR, RENFREW, PEMBROKE AND MATTAWA.

Bench Marks.	Location and Description.	Elevations. Instrumental.	Adjusted.
CCCCXV.	On S. end of W. abutment, G.T.R. bridge over Ottawa river, Vaudreuil	88·30	88·61
	Base of G.T.R. rail, opposite B.M. CCCCXV	89·55	89·89
CCCCXXX.	On S.E. corner of bridge over brook, opposite Vaudreuil church	84·55	84·88
	Base of C.P.R. rail, centre of bridge, opposite Vaudreuil church	86·57	86·88
CCCCXXXI.	On stone front of Vaudreuil R.C. church	86·35	86·89
	Base of C.P.R. rail at crossing	94·09	94·40
548	Brass headed nail in elm root, 50 feet W. of track, ½ mile N. of the Cadieux station	94·34	94·69
	Base of C.P.R. rail, crossing, Como, P.Q.	90·19	90·50
CCCCXXXII.	On W. end of S. face of culvert, 1,000 feet S. of Como station	87·58	87·93
	Base of C.P.R. rail, opposite B.M. CCCCXXXII	89·53	89·85
	Base of C.P.R. rail, opposite Como station	99·30	99·62
	Base of C.P.R. rail, main road crossing, Hudson	113·61	113·94
CCCCXXXIII.	On W. end of S. face of culvert, 1,535 feet S. of Hudson station	97·96	98·31
	Base of C.P.R. rail, opposite B.M. CCCCXXXIII	100·23	100·55
	Base of C.P.R. rail, opposite Hudson station	91·57	91·90
	Base of C.P.R. rail, opposite Hudson Heights station	87·92	88·24
	Base of C.P.R. rail, main road crossing	98·37	98·69
CCCCXXXIV.	On N. end of S. face of culvert, one mile E. of Lavigne station	87·16	87·53
	Base of C.P.R. rail, opposite B.M. CCCCXXXIV	90·68	91·01
	Base of C.P.R. rail, opposite Lavigne station	105·64	105·97
	Base of C.P.R. rail, opposite main road crossing	103·97	104·30
549	Brass headed nail on elm root, second tree W. of track	103·43	103·80
CCCCXXXV.	On S. face of W. abutment of bridge 2 miles E. of Rigaud	98·53	98·89
	Base of rail, centre of bridge, 2 miles E. of Rigaud station	99·41	99·75
	Base of C.P.R. rail, opposite Rigaud station	103·90	104·24
	Base of C.P.R. rail, centre of bridge over Riv. à la Graisse	104·20	104·54
CCCCXXXVI.	On S. face of W. abutment of bridge over Riv. à la Graisse	99·37	99·74
CCCCXXXVII.	On rear end N. side of Rigaud R.C. church	108·74	109·11
	Base of C.P.R. rail, junction of branch to Pte. Fortune	106·81	107·15
	Base of C.P.R. rail, crossing on branch to Pte. Fortune	122·17	122·52
550	+On N.E. corner of culvert, 4·10 miles from Pte. Fortune junction	98·90	99·29
	Base of C.P.R. rail, opposite B.M. 550	105·49	105·84
551	+On N.E. corner of culvert, 4·8 miles from Pte. Fortune junction	92·03	92·41
	Base of C.P.R. rail, opposite B.M. 551	92·20	92·55
552	Brass headed nail on S.W. root of tree, 1,650 feet E. of Pte. Fortune station	126·06	126·44
	Base of C.P.R. rail at Pte. Fortune station	123·57	123·93
CCCCXXXVIII.	On centre of E. foundation of Pte. Fortune post office	83·73	84·13
553	Brass headed nail on S.W. corner of Pte. Fortune post office wharf	80·41	80·81
	Base of C.P.R. rail crossing, 2¼ miles W. of Rigaud bridge	147·29	147·64
	Base of C.P.R. rail, crossing boundary between Quebec and Ontario	171·77	172·12
	Base of C.P.R. rail, crossing one mile E. of St. Eugene	182·92	183·28
	Base of C.P.R. rail at St. Eugene station	180·90	181·27
	Base of C.P.R. rail, centre of St. Eugene station culvert	180·82	181·19
CCCCXXXIX.	On S. end of W. wall of St. Eugene station culvert	177·44	177·84
CCCCXL.	Under bay window of priest's residence, St. Eugene	190·43	190·82
CCCCXLI.	On N.E. corner stone front of St. Eugene R.C. church	191·54	191·94
	Base of C.P.R. crossing	184·19	184·55
CCCCXLII.	On S. end of W. face of culvert, 3 miles W. of St. Eugene station	226·43	226·82
	Base of C.P.R. rail, centre of culvert W. of St. Eugene station	232·06	232·42
	On E. end of W. face of culvert, 3 miles W. of St. Eugene station	226·43	226·82
	Base of C.P.R. rail first crossing E. of station	259·00	259·38
	Base of C.P.R. rail at Stardale station	290·39	290·77
	Base of C.P.R. rail at Stardale station crossing	290·88	291·26
	Base of C.P.R. rail, centre of culvert, marked 31·8 miles	250·56	250·97
CCCCL.	On S. side of E. abutment of culvert along C.P.R., marked 31·8 miles	247·98	248·38
CCCCLI.	On centre of W. side of Hawkesbury R.C. church	147·92	148·34
	Base of G.T.R. rail at G.T.R. station, Hawkesbury	142·95	143·34
	Base of G.T.R. rail, Main street crossing, Hawkesbury	143·81	144·20
560	On N.E. corner of culvert near junction of G.N.R.	159·36	159·78
	Base of G.T.R. rail, crossing of Morris lane, Hawkesbury	180·88	181·28
	Base of G.T.R. rail crossing, branch to Hawkesbury	183·00	183·39
	Base of G.T.R. rail crossing, branch to Hawkesbury	241·29	241·67
	Base of G.T.R. rail crossing, branch to Hawkesbury	258·37	258·75
	Base of C.P.R. rail, crossing of G.T.R. to Hawkesbury	263·84	264·27

VAUDREUIL to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
559	Brass headed nail on elm tree, 100 feet S. of C.P.R. and 150 feet E. of G.T.R.	261·21	261·62
	Base of rail at crossing of G.T.R. railway to Hawkesbury	263·90	264·27
	Base of rail at Vankleek Hill crossing	270·89	271·28
	Base of rail at Vankleek Hill station	271·53	271·92
	Base of rail, third crossing, E. of McAlpin's station	261·21	261·60
	Base of rail, second crossing E. of McAlpin's station	216·25	216·63
CCCCXLIX.	On N.E. corner of McAlpin's post office	223·28	223·69
	Base of rail at McAlpin's station	221·79	222·17
	Base of rail at second crossing E. of Caledonia Springs	213·15	213·55
	Base of rail, first crossing E. of Caledonia Springs	188·93	188·33
CCCCXLVIII.	On S. end, E. abutment of culvert marked 39·33 miles	181·00	181·42
	Base of C.P.R. rail, centre of culvert, marked 39·33 miles	183·55	183·95
	Base of C.P.R. rail at Caledonia Springs station	167·38	167·77
CCCCXLVII.	On N. face of post office, Caledonia Springs	166·80	167·23
	Base of C.P.R. rail, crossing Caledonia Springs	167·45	167·85
	Base of C.P.R. rail, centre of trestle, Caledonia Springs	167·42	167·82
	Base of C.P.R. rail at crossing, Caledonia Springs	170·72	171·13
558	Brass headed nail, centre of culvert, marked 43 miles	172·18	172·62
	Base of rail, crossing opposite peat factory	174·54	174·95
	Base of rail, crossing	178·66	179·07
	Base of rail at Alfred station	177·47	177·88
	Base of rail, first crossing W. of Alfred station	177·79	178·21
	Base of rail, second crossing W. of Alfred station	176·01	176·43
	Base of rail, third crossing E. of Plantagenet station	174·54	174·95
	Base of rail, second crossing, E. of Plantagenet station	198·42	198·83
CCCCXLVI.	On N. face, E. abutment, bridge over S. Nation river	168·59	169·05
	Base of C.P.R. rail, centre of bridge over S. Nation river	169·73	170·16
CCCCXLV.	On S. face, N. abutment, bridge over S. Nation river	165·21	165·66
	Base of C.P.R. rail at Plantagenet crossing	169·58	170·00
	Base of C.P.R. rail at Plantagenet station	169·51	169·93
557	On N.E. corner of bridge, marked 51·3 miles	169·78	170·24
	Base of C.P.R. rail, centre of bridge, marked 51·3 miles	171·69	172·12
	Base of C.P.R. rail crossing, Plantagenet	211·21	211·64
556	Brass headed nail, centre of wooden bridge, marked 54·2 miles	242·24	242·70
	Base of C.P.R. rail at crossing, Pendleton	241·37	241·80
	Base of C.P.R. rail at crossing, Pendleton	241·34	241·76
	Base of C.P.R. rail at Pendleton station crossing	233·10	233·53
	Base of C.P.R. rail at Pendleton station crossing	231·80	232·23
	Base of C.P.R. rail, fifth crossing, E. of The Brook station	217·12	217·56
CCCCXLIV.	On S. face of E. abutment of culvert, marked 57 miles	192·32	192·78
	Base of C.P.R. rail, centre of culvert, marked 57 miles	194·53	194·97
	Base of C.P.R. rail, fourth crossing, E. of The Brook station	164·91	165·34
555	Brass headed nail, N. side of E. end of trestle over The Brook	163·68	164·15
	Base of C.P.R. rail, centre of bridge over The Brook	165·59	166·02
	Base of C.P.R. rail, third crossing E. of The Brook station	167·29	167·74
	Base of C.P.R. rail, second crossing E. of The Brook station	180·07	180·52
	Base of C.P.R. rail at The Brook crossing	206·51	206·96
CCCCXLIII.	Under first window, N. side of The Brook R.C. church	209·83	210·31
554	Brass headed nail on W. root of tree, 75 feet S. of track, The Brook crossing	212·15	212·63
	Base of C.P.R. rail, opposite The Brook station	214·78	215·23
	Base of C.P.R. rail, first crossing, W. of The Brook station	215·58	216·02
	Base of C.P.R. rail, second crossing, W. of The Brook station	211·92	212·37
	Base of C.P.R. rail, third crossing, W. of The Brook station	213·63	214·08
	Base of C.P.R. rail, fourth crossing, W. of The Brook station	210·67	211·12
CCCCLII.	On N. end of E. wall of culvert on C.P.R., marked 64·1 miles	206·66	207·15
	Base of C.P.R. rail, centre of culvert, marked 64·1 miles	211·44	211·90
	Base of C.P.R. rail, 5th crossing, W. of The Brook station	218·38	218·84
	Base of C.P.R. rail at Hammond station	219·54	219·99
	Base of C.P.R. rail, crossing of G.T.R. to Rockland	219·59	220·04
	Base of C.P.R. rail, first crossing W. of Hammond station	242·34	242·80
	Base of C.P.R. rail, second crossing W. of Hammond station	267·70	268·16
	Base of C.P.R. rail, third crossing W. of Hammond station	274·22	274·68
	Base of C.P.R. rail, fourth crossing W. of Hammond station	273·66	274·13
	Base of C.P.R. rail, fifth crossing W. of Hammond station	276·54	277·01
	Base of C.P.R. rail at Leonard station	271·64	272·10
	Base of C.P.R. rail at Leonard crossing	271·56	272·03
CCCCLIII.	On N.W. corner of Leonard county court house	271·38	271·87
	Base of C.P.R. rail, second crossing W. of Leonard station	276·49	276·95
	Base of C.P.R. rail, third crossing W. of Leonard station	276·96	277·42
	Base of C.P.R. rail, fourth crossing W. of Leonard station	271·21	271·69
	Base of C.P.R. rail, fifth crossing W. of Leonard station	237·95	238·42
	Base of C.P.R. rail at Navan station	239·97	240·44
	Base of C.P.R. rail at Navan station crossing	238·68	239·15
	Base of C.P.R. rail, second crossing W. of Navan station	235·49	235·96
	Base of C.P.R. rail, third crossing W. of Navan station	234·41	234·89
	Base of C.P.R. rail, fourth crossing W. of Navan station	229·29	229·77
	Base of C.P.R. rail, fifth crossing W. of Navan station	230·29	230·77

VAUDREUIL to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of C.P.R. rail at Blackburn station	229·01	229·49
	Base of C.P.R. rail at Blackburn crossing	227·99	228·48
561	+On S.W. corner of culvert, 3¼ miles E. of Rideau river	209·87	210·39
	Base of C.P.R. rail, third crossing E. of Rideau river	226·32	226·81
	Base of C.P.R. rail, second crossing E. of Rideau river	219·81	220·30
	Base of C.P.R. rail at crossing of St. L. & O. Ry	197·09	197·58
CCCCLIV.	Base of C.P.R. rail at crossing E. side of Rideau river	197·32	197·83
	On N. side of E. abutment, C.P.R. bridge over Rideau river	194·68	195·22
	Base of rail, centre of C.P.R. bridge over Rideau river	197·69	198·20
CCCCLV.	Base of rail, centre of G.T.R. bridge over Rideau river	195·11	195·61
CCCCLVIII.	On foot of E. face of W. abutment, Laurier bridge, Ottawa	217·19	217·72
CCCCLIX.	On W. side of main entrance to Woods building, Ottawa	223·12	223·65
	Under second window, S. side of City Hall, Ottawa	240·36	240·89
CCCCLVI.	Base of rail at Central station, Ottawa	213·71	214·21
562	On N.E. corner of W. pier of Dufferin bridge, Ottawa	212·82	213·35
CCCCLVII.	+On W. end of lower gates of lock 1, Rideau canal	154·14	154·68
	Foot of W. curved wall of lock 1, Rideau canal	135·18	135·72
	Zero of lock 1 gauge, Rideau canal	122·37	122·90
	Coping, E. end of lower gates of lock 1, Rideau canal	154·11	154·65
CCCCLXXIII.	Coping, E. end of lower gates of lock 2, Rideau canal	154·11	154·65
	On shore end of E. face of lock 1, Rideau canal	153·13	153·66
	Coping, E. end of lower gates of lock 3, Rideau canal	169·87	170·40
	Coping, E. end of lower gates of lock 4, Rideau canal	170·06	170·59
	Coping, E. end of lower gates of lock 5, Rideau canal	179·89	180·42
	Coping, E. end of lower gates of lock 6, Rideau canal	189·93	190·47
	Coping, E. end of lower gates of lock 7, Rideau canal	199·71	200·24
	Coping, E. end of lower gates of lock 8, Rideau canal	211·66	212·19
	Coping, E. end of upper gates of lock 8, Rideau canal	211·69	212·23
CCCCLVI.	On N.E. corner of W. pier of Dufferin bridge, Ottawa	212·81	213·35
	Base of C.P.R. rail, centre of Alexandra bridge	192·30	192·85
	High water elevation of Hull concrete wharf	146·56	147·07
CCCCLXXII.	Medium elevation of Hull concrete wharf	140·85	141·35
	70 feet from S.W. corner of Hull concrete wharf	146·56	147·09
CCCCLXXI.	Coping, W. shore end of Hull concrete wharf	147·01	147·52
	On E. abutment of C.P.R. crossing of E. Ry., Hull end of Alexandra bridge	174·01	174·54
CCCCLXX.	On S.E. side of rear entrance to Hull R.C. church	177·71	178·25
	Centre of Union bridge between Hull and Ottawa	164·83	165·34
CCCCLXIX.	On E. end of N. abutment of bridge between Ottawa and Hull	164·07	164·60
CCCCLIX.	Under second window, S. side of City Hall, Ottawa	240·36	240·89
CCCCLXVIII.	Between first and second window, Mortimer Co. building, Ottawa	238·38	238·91
CCCCLXVII.	On W. side of entrance N. side of Water Works building, Ottawa	179·00	179·54
CCCCLXVI.	On S. side of private entrance Union station, Ottawa	184·53	185·06
	Base of C.P.R. rail at Union station, Ottawa	180·93	181·43
CCCCLXV.	Base of C.P.R. rail, centre of Prince of Wales bridge, Ottawa	190·78	191·28
	On W. side of W. abutment, centre of Prince of Wales bridge, Ottawa	185·35	185·89
	Base of C.P.R. crossing, Chaudiere St., Ottawa	185·45	185·96
	Base of C.P.R. crossing, Centre street, Ottawa	198·78	199·30
	Base of C.P.R. crossing, Queen street, Ottawa	202·87	203·38
	Base of C.P.R. crossing	214·56	215·08
CCCCLXXIV.	On S. end of W. wall of culvert 1·7 miles W. of Ottawa	200·24	200·79
	Base of C.P.R. rail, centre of culvert, 1·7 miles W. of Ottawa	205·73	206·25
	Base of C.P.R. rail crossing, 1,500 feet W. of Exchange Hotel	216·98	217·49
	Base of C.P.R. rail, centre of culvert, ⅓ mile E. of Britannia station	192·19	192·71
CCCCLXIII.	On N. side of E. wall of G.T.R. culvert, ⅓ mile E. of Britannia station	190·35	190·89
CCCCLXII.	On S.E. corner of J. Whitton house, next to Britannia P.O.	203·19	203·74
	Base of C.P.R. rail, opposite post office crossing, Britannia	202·85	203·38
	Base of C.P.R. rail, opposite O.E. Ry. pier, Britannia	202·35	202·88
	On inner down stream, corner of O.E. Ry. pier, Britannia	198·39	198·95
	On inner up stream, corner of O.E. Ry. pier, Britannia	198·48	199·03
	Base of C.P.R. rail, second crossing E. of G.T.R. crossing	206·87	207·40
	Base of C.P.R. rail, first crossing E. of G.T.R. crossing	214·13	214·65
	Base of C.P.R. rail, under G.T.R. crossing of C.P.R.	217·67	218·19
	Base of G.T.R. rail, centre of overhead crossing of C.P.R.	241·61	242·13
CCCCLXI.	On S. side of W. wall of G.T.R. crossing of C.P.R.	238·60	239·15
567	On N. side of W. wall of G.T.R. crossing of C.P.R.	241·19	241·75
	Base of G.T.R. rail, centre of trestle	235·60	236·13
	Base of G.T.R. rail, centre of trestle	219·51	220·03
	Base of G.T.R. rail, sixth crossing E. of S. March station	219·78	220·30
	Base of G.T.R. rail, fifth crossing E. of S. March station	219·84	220·26
	Centre of culvert, back of John Beattie's house	242·14	242·67
566	On S.E. corner of culvert, back of John Beattie's house	240·97	241·54
	Base of G.T.R. rail, fourth crossing E. of March station	245·67	246·21
	Base of G.T.R. rail, third crossing E. of March station	251·83	252·37

SESSIONAL PAPER No. 19a

VAUDREUIL to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued*.

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail, second crossing E. of March station...	257·10	257·64
	Base of G.T.R. rail, first crossing E. of March station.....	273·86	274·40
	Base of G.T.R. rail, at South March station..	283·12	283·66
	Base of G.T.R. rail, culvert, 700 feet W. of S. March station.	288·70	289·24
565	On S.E. corner of G.T.R. culvert, 700 feet W. of S. March station	286·68	287·24
	Base of G.T.R. rail, first crossing, W. of March station.....	320·05	320·59
	Base of G.T.R. rail, third crossing, E. of Carp station.....	338·13	338·66
	Base of G.T.R. rail, main road crossing, Carp station.....	324·03	324·57
	Base of G.T.R. rail, culvert 3 miles E. of Carp station.....	319·58	320·12
564	On S.E. corner of culvert 3 miles E. of Carp station.....	317·96	318·53
	Base of G.T.R. rail, centre of culvert, Carp...	316·14	316·68
	Base of G.T.R. rail, first crossing E. of Carp station.....	310·51	311·06
563	Brass headed nail on S.E. corner of culvert 1,450 feet E. of Carp station.....	309·94	310·52
	Base of G. T. R. rail, centre of culvert, 1,450 ft. E. of Carp station	310·58	311·12
	Base of G. T. R. rail, opposite Carp station.....	310·31	310·86
	Base of G. T. R. rail, 1st crossing W. of Carp station.....	307·01	307·55
	Base of G. T. R. rail, 2nd crossing W. of Carp station.....	305·88	306·42
	Base of G. T. R. rail centre of culvert over Carp river.....	309·73	310·29
CCCCLX.	On N. side of E. aoutment, G. T. R. culvert over Carp river..	307·35	307·93
	Base of G. T. R. rail, 3rd crossing W. of Carp station.....	311·84	312·40
CCCCLXXIV.	On S. side of E. wall of culvert, 3 miles W. of Carp station	310·04	310·62
	Base of G. T. R. rail, centre of culvert, 3 miles W. of Carp station	312·87	313·43
	Base of G. T. R. rail, 4th crossing W. of Carp station.....	308·67	309·22
	Base of G. T. R. rail, 5th crossing W. of Carp station.....	305·39	305·94
570	On S.E. corner of G. T. R. culvert, 4 miles E. of Kinburn station.	303·28	303·86
	Base of G. T. R. rail, opposite bench mark 570.....	303·97	304·53
	Base of G. T. R. rail at Avon lale crossing.	305·87	306·43
	Base of G. T. R. rail at Avondale station..	305·95	306·52
571	On S.W. corner of culvert, 2·10 miles E. of Kinburn station..	307·52	308·12
	Base of G. T. R. rail, opposite bench mark 571.....	308·33	308·90
	Base of G. T. R. rail, 1st crossing E. of Kinburn station.....	314·30	314·87
	Base of G. T. R. rail at Kinburn station.....	311·53	312·09
	Base of G. T. R. rail, at Kinburn crossing.....	310·38	310·94
572	On S.E. corner of G. T. R. culvert, 930 ft. W. of Kinburn station	307·25	307·85
	Base of G. T. R. rail, centre of culvert, 930 ft. W. of Kinburn station	307·94	308·50
	Base of G. T. R. rail, centre of culvert over large brook	305·14	308·71
	Base of G. T. R. rail, 2nd crossing W. of Kinburn station.....	312·97	313·55
	Base of G. T. R. rail 3rd crossing W. of Kinburn station.....	323·25	323·82
573	On N.E. corner of culvert, 2 miles W. of Kinburn station..	335·36	335·97
	Base of G. T. R. rail, opposite bench mark 573.....	336·25	336·83
	Base of G. T. R. rail, 4th crossing W. of Kinburn station	336·76	337·34
	Base of G. T. R. rail, 6th crossing W of Kinburn station.	310·89	311·47
CCCCLXXV.	On E. side of N. abutment of G. T. R. bridge Mississippi river.....	290·93	291·53
	Centre of G. T. R. bridge over Mississippi river, Galetta.	289·96	290·54
CCCCLXXVI.	On up stream end of S.W. abutment, bridge over Mississippi river..	290·13	290·73
	Centre of over-head crossing of main road, Galetta.....	289·96	290·53
	Base of G. T. R. rail at Galetta station...	292·75	293·32
	Base of G. T. R. rail at Galetta crossing.	293·66	294·23
	Base of G. T. R. rail, 2nd crossing W. of Galetta station.....	304·08	304·67
574	On N.E. corner of culvert, 1¼ miles W of Galetta station.....	307·28	307·90
	Base of G. T. R. rail at Marshall's Bay station.....	312·17	312·75
	Base of G. T. R. rail, 1st crossing W. of Marshall's Bay station	308·30	308·89
	Base of G. T. R. rail, 2nd crossing W. of Marshall's Bay station	313·80	314·39
	Base of G. T. R. rail, 3rd crossing W. of Marshall's Bay station	310·67	311·25
	Base of G. T. R. rail, German street crossing, Arnprior.....	292·34	292·93
	Base of G. T. R. rail, Russell street crossing, Arnprior.....	293·84	294·42
	Base of G. T. R. rail, Daniel street crossing, Arnprior.....	295·50	296·05
	Base of G. T. R. rail, John street crossing, Arnprior.....	297·47	298·05
	Base of C. P. R. rail, C. P. R. station, Arnprior.....	298·22	298·82
CCCCLXXVII.	On centre of W. end foundation, C. P. R. station, Arnprior..	300·55	301·17
	Base of C. P. R. rail at crossing of G. T. R., Arnprior.	300·07	300·67
	Base of C. P. R. rail, Norma street crossing, Arnprior.	300·59	301·18
	Base of C. P. R. rail, town line crossing, Arnprior.....	301·12	301·71
575	On elm tree, close to C. P. R. W. fence, 5,575 ft. W. of C. P. R. station.....	298·32	298·95
	Base of C. P. R. rail, 3rd cross road W of Arnprior station...	299·33	299·92
CCCCLXXVIII	On N.E. corner of culvert, 54·1 miles W. of Ottawa.....	279·57	280·20
	Base of C. P. R. rail, opposite bench mark CCCCLXXVIII..	284·73	285·33
	Base of C. P. R. rail, at Braeside crossing.....	278·58	279·18

VAUDREUIL to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of C. P. R. rail, at Braeside station	278·85	279·45
CCCCLXXIX.	On N.W. face of culvert, 56·9 miles W. of Ottawa	264·81	265·44
	Base of C. P. R. rail, opposite bench mark CCCCLXXIX	274·22	274·83
582	On S.W. corner of culvert, 56·9 miles W. of Ottawa	273·12	273·75
	Base of C. P. R. rail, opposite bench mark 582	275·41	276·02
	Base of C. P. R. rail, at Sand Point station	264·82	265·43
CCCCLXXXVII.	On front of new brick school, centre of Sand Point village	267·07	267·71
	Base of C. P. R. rail, 1st crossing W. of Sand Point station	268·76	269·36
	Base of C. P. R. rail, 2nd crossing W. of Sand Point station	287·16	287·77
	Base of C. P. R. rail, 3rd crossing W. of Sand Piont station	288·43	289·03
	Base of C. P. R. rail, opposite bench mark CCCCLXXXVI	269·92	270·53
CCCCLXXXVI.	On W. end of N. face of culvert, 59·7 miles W. of Ottawa	261·92	262·56
	Base of C. P. R. rail, culvert, 60·6 miles W. of Ottawa	251·22	251·82
581	On N.E. corner of culvert, 60·6 miles W. of Ottawa	250·07	250·70
	Base of C. P. R. rail, 1st crossing E. of Castleford station	255·99	256·60
	Base of C. P. R. rail, at Castleford station	263·86	264·47
	Base of C. P. R. rail, 1st crossing W. of Castleford station	264·50	265·11
	Centre of C. P. R. bridge over brook W. of Castleford station	265·58	266·20
	Base of C. P. R. rail, 2nd crossing W. of Castleford station	303·13	303·74
	Base of C. P. R. rail, culvert 63·5 miles W. of Ottawa	304·55	305·16
580	On N.E. corner of culvert 63·5 miles W. of Ottawa	303·86	304·50
	Base of C. P. R. rail, 4th crossing E. of Russell station	333·69	334·31
	Base of C. P. R. rail 3rd crossing E. of Russell station	350·33	351·00
	Base of C. P. R. rail, 2nd crossing E. of Russell station	408·08	408·71
	Base of C. P. R. rail, 1st crossing E. of Russell station	409·11	409·74
	Base of C. P. R., centre of culvert, 66·7 miles W. of Ottawa	409·77	410·40
579	On N.W. corner of culvert, 66·7 miles W. of Ottawa	409·54	409·20
	Base of C. P. R. rail, at Russell platform station	415·44	416·06
	Base of C. P. R. rail, 4th crossing E. of Renfrew station	442·52	443·14
	Base of C. P. R. rail, opposite bench mark 578	439·75	440·38
578	On N.W. corner of culvert, 68·5 miles W. of Ottawa	439·21	439·86
	Base of C. P. R. rail, 3rd crossing E. of Renfrew station	444·71	445·33
	Base of C. P. R. rail, 2nd crossing E. of Renfrew station	441·49	442·12
	Base of C. P. R. rail, street crossing, Renfrew station	418·38	419·01
CCCCLXXXV.	On N. base of C. P. R. tank, Renfrew station	418·58	419·25
CCCCLXXXIV.	On E. end foundation of Renfrew station	417·82	418·48
	Base of C. P. R. rail, at Renfrew station	415·81	416·45
	Base of C. P. R. rail, crossing W. of Douglas street, Renfrew	414·52	415·15
	Base of C. P. R. rail, crossing of Monro street, Renfrew	412·05	412·69
	Base of C. P. R. rail, crossing of Main street, Renfrew	410·26	410·89
	Base of C. P. R. rail, crossing of Argyle street, Renfrew	406·45	407·09
	Base of C. P. R. rail, crossing E. of Douglas street, Renfrew	402·48	403·11
	Base of C. P. R. rail, crossing Douglas street, Renfrew	399·48	400·12
	Base of C. P. R. rail, crossing W. of Douglas street, Renfrew	398·55	399·19
CCCCLXXXIII.	On S. end of S. abutment bridge over Bonnechere river, Renfrew	388·03	388·69
	Centre of C. P. R. bridge over Bonnechere river	388·12	388·76
CCCCLXXXII.	On E. face of N. abutment, C. P. R. bridge over Bonnechere river	385·34	386·00
	Base of C. P. R. rail, 3rd crossing, E. of Eganville Junction	400·80	401·44
	Base of C. P. R. rail, opposite bench mark 577	403·99	404·62
577	On N.E. corner of culvert, 72·5 miles W. of Ottawa	403·27	403·93
	Base of C. P. R. rail, 2nd crossing E. of Eganville Junction	405·20	405·83
	Base of C. P. R. rail, 1st crossing E. of Eganville Junction	403·81	404·44
	Base of C. P. R. rail, at Eganville Junction	405·02	405·66
	Base of C. P. R. rail, opposite bench mark 576	431·40	432·04
576	On N.W. corner of culvert, 74·6 miles W. of Ottawa	431·12	431·79
	Base of C. P. R. rail, 2nd crossing E. of Haley's station	441·66	442·30
	Base of C. P. R. rail, 1st crossing E. of Haley's station	511·80	512·44
	Base of C. P. R. rail, opposite bench mark CCCCLXXXI	515·39	516·03
CCCCLXXXI.	On E. face of C. P. R. culvert, 76·88 miles W. of Ottawa	511·56	512·23
	Base of C. P. R. rail, at Haley's station	528·63	529·28
	Base of C. P. R. rail, 1st crossing W. of Haley's station	526·49	527·15
	Base of C. P. R. rail, 2nd crossing W. of Haley's station	519·23	519·88
	Base of C. P. R. rail, opposite bench mark CCCCLXXX	517·87	518·53
CCCCLXXX	On E. face of C. P. R. culvert, 80·1 miles W. of Ottawa	509·50	510·19
	Base of C. P. R. rail, culvert, 80·1 miles W. of Ottawa	517·87	518·53
CCCCLXXXVIII	On E. face of C. P. R. culvert, 81·1 miles W. of Ottawa	507·46	508·14
	Base of C. P. R. rail, culvert, 81·1 miles W. of Ottawa	511·57	512·23
	Base of C. P. R. rail, 3rd crossing W. of Haley's station	507·68	508·33
	Base of C. P. R. rail, 4th crossing W. of Haley's station	496·48	497·13
	Base of C. P. R. rail, 5th crossing W. of Haley's station	499·55	500·20
CCCCLXXXIX.	On E. end of N. abutment of C. P. R. bridge over Gould's brook	474·47	475·17
	Base of C. P. R. rail, centre of C. P. R. bridge over Gould's brook	477·06	477·72
	Base of C. P. R. rail, 1st crossing, E. of Cobden station	474·82	475·49
	Base of C. P. R. rail, at Cobden station	474·91	475·57
	Base of C. P. R. rail, 1st crossing W. of Cobden station	475·60	476·27

VAUDREUIL to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
CCCCXC.	On E. face of C. P. R. culvert, 86·3 miles W. of Ottawa	472·86	473·55
	Base of C. P. R. rail, culvert, 86·3 miles W. of Ottawa	477·99	478·66
CCCCXCI.	On E. face of C. P. R. culvert, 87·2 miles W. of Ottawa	452·74	453·45
	Base of C. P. R. rail, culvert, 87·2 miles W. of Ottawa	458·72	459·39
	Base of C. P. R. rail, 2nd crossing W. of Cobden station	449·87	450·54
CCCCXCII.	On W. face of C. P. R. culvert, 89·4 miles W. of Ottawa	427·31	428·02
	Base of C. P. R. rail, culvert, 89·4 miles W. of Ottawa	431·27	431·95
	Base of C. P. R. rail 3rd crossing W. of Cobden station	433·26	433·93
	Base of C. P. R. rail, 4th crossing W. of of Cobden station	441·76	442·44
	Base of C. P. R. rail 5th crossing W. of Cobden station	434·70	435·37
	Base of C.P.R. rail, Snake River crossing	423·61	424·29
	Base of C.P.R. rail, Snake River station	423·05	423·73
583	On E. side of S. end of C.P.R. bridge over Snake river	413·16	413·88
	Centre of C.P.R. bridge over Snake river	415·16	415·85
	Base of C.P.R. rail, first crossing W. of Snake River	433·05	433·73
584	On end of C.P.R. culvert, 92·7 miles W. of Ottawa	444·30	445·01
	Base of C.P.R. rail, centre of culvert, 92·7 miles W. of Ottawa	444·51	445·20
	Base of C.P.R. rail, second crossing W. of Snake River station	435·16	435·84
585	On E. end of C.P.R. culvert, 93·8 miles W. of Ottawa	434·73	435·44
	Base of C.P.R. rail, culvert, 93·8 miles W. of Ottawa	435·36	436·04
CCCCXCIII.	On W. end of S. wall of culvert, 94·7 miles W. of Ottawa	418·78	419·49
	Base of C.P.R. rail, culvert, 94·7 miles W. of Ottawa	424·28	424·97
	Base of C.P.R. rail at Graham station	415·53	416·21
	Base of C.P.R. rail, centre of bridge, over Muskrat river	415·67	416·36
	Base of C.P.R. rail, first crossing W. of Graham station	419·00	419·70
CCCCXCIV.	On rock on E. side of track, 97·1 miles W. of Ottawa	429·56	430·29
	Base of C.P.R. rail opposite B.M. CCCCXCIV	427·91	428·61
CCCCXCV.	On E. face of C.P.R. culvert, 99 miles W. of Ottawa	440·62	441·35
	Base of C.P.R. rail, culvert, 99 miles W. of Ottawa	442·00	442·70
	Base of C.P.R. rail, government road crossing, Pembroke	421·27	442·83
	Base of C.P.R. rail, government road platform, Pembroke	422·14	421·97
586	On W. end of C.P.R. culvert, 100·7 miles W. of Ottawa	385·55	386·29
	Base of C.P.R. rail, opposite B.M. 586	387·29	388·00
	Base of C.P.R. rail, first crossing W. of government road stn.	377·83	378·54
	Base of C.P.R. rail, second crossing W. of govt. road station	381·91	382·61
586½	Brass headed nail, 11 feet from lower end, inner edge of wharf	371·22	371·96
	Base of C.P.R. rail, third crossing W. of govt. road station	382·31	383·01
	Base of C.P.R. rail, fourth crossing W. of govt. road station	378·76	379·46
	Base of C.P.R. rail, third crossing E. of Pembroke station	379·37	380·09
	Base of C.P.R. rail, second crossing E. of Pembroke station	379·26	379·98
	Base of C.P.R. rail, first crossing E. of Pembroke station	380·32	381·04
	Base of C.P.R. rail at Pembroke station	380·18	380·89
CCCCXCVI.	Under window, N. end of Pembroke station	382·29	383·04
DIII.	On E. face of chimney of Pembroke water works building	377·45	378·19
593	On S. end of culvert, E. side of crossing E. of Petawawa	398·43	399·17
	Base of C.P.R. rail, thirteenth crossing E. of Petawawa	399·83	400·54
	Base of C.P.R. rail, twelfth crossing E. of Petawawa	414·14	414·86
	Base of C.P.R. rail, eleventh crossing E. of Petawawa	437·72	438·43
	Base of C.P.R. rail, culvert, 108·3 miles W. of Ottawa	430·14	430·86
DII.	On S.W. corner of culvert, 108·3 miles W. of Ottawa	409·02	409·77
	Base of C.P.R. rail, tenth crossing E. of Petawawa station	427·77	428·48
	Base of C.P.R. rail, opposite B.M. DI	447·98	448·71
DI.	On N. end of E. face of culvert, 109·2 miles W. of Ottawa	440·07	440·82
	Base of C.P.R. rail, ninth crossing E. of Petawawa station	460·34	461·06
	Base of C.P.R. rail, eighth crossing E. of Petawawa station	471·30	472·03
	Base of C.P.R. rail, seventh crossing E. of Petawawa station	481·16	481·88
	Base of C.P.R. rail, 111·7 miles W. of Ottawa	481·92	482·65
D.	On N.W. face of culvert, 111·7 miles W. of Ottawa	467·03	467·79
	Base of C.P.R. rail, sixth crossing E. of Petawawa station	482·10	482·82
	Base of C.P.R. rail, fifth crossing E. of Petawawa station	481·34	482·07
592	On S.W. corner of culvert, 112·75 miles W. of Ottawa	484·21	484·96
	Base of C.P.R. rail, fourth crossing E. of Petawawa station	484·59	485·32
	Base of C.P.R. rail, third crossing E. of Petawawa station	477·18	477·91
	Base of C.P.R. rail, second crossing E. of Petawawa station	474·46	475·19
	Base of C.P.R. rail, road to Petawawa wharf	468·61	469·35
	Base of C.P.R. rail at Petawawa station	466·61	467·34
DIV.	On S. face of rocky point, near water's edge, 1,400 feet above wharf	383·47	384·24
691½	Brass headed nail, up stream front end of Petawawa wharf	372·71	373·48
	Centre of C.P.R. culvert at road to Petawawa wharf	464·19	464·93
591	On centre of E. end of culvert at road to Petawawa wharf	463·36	464·12
	Base of C.P.R. rail, at crossing to Petawawa wharf	464·21	464·94
	Centre of C.P.R. bridge over Petawawa river	459·66	460·39
CCCCXCIX.	On up stream end of W. abutment of bridge over Petawawa river	455·52	456·29
	Base of C.P.R. rail, fifth crossing E. of Thistle station	482·36	483·09
	Centre of C.P.R. culvert, 117·1 miles W. of Ottawa	483·44	484·17
590	On S.W. corner of C.P.R. culvert, 117·1 miles W. of Ottawa	483·06	483·83
	Base of C.P.R. rail, fourth crossing E. of Thistle station	483·45	484·17

VAUDREUIL to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of C.P.R. rail, third crossing E. of Thistle station	498·49	499·23
	Base of C.P.R. rail, second crossing E. of Thistle station	505·12	505·87
	Centre of C.P.R. culvert, 120·2 miles W. of Ottawa	509·84	510·59
589	On S.E. corner of culvert, 120·2 miles W. of Ottawa	509·16	509·93
	Base of C.P.R. rail, first crossing E. of Thistle station	505·47	506·21
	Base of C.P.R. rail, Thistle flag station	508·18	508·92
	Base of C.P.R. rail opposite B.M. CCCCXCVIII	494·93	495·68
CCCCXCVIII.	On N. end E. face of culvert, 122·7 miles W. of Ottawa	490·24	491·02
	Base of C.P.R. rail, third crossing E. of Chalk River station	485·52	486·28
588	On S.W. corner, E. end of bridge over Chalk river	483·11	483·90
	Base of C.P.R. rail, centre of bridge over Chalk river	486·52	487·28
	Base of C.P.R. rail, second crossing E. of Chalk River station	486·44	487·20
	Base of C.P.R. rail, centre of culvert, 125·3 miles W. of Ottawa	493·84	494·59
587	On S.W. corner of culvert, 125·3 miles W. of Ottawa	493·55	494·33
	Base of C.P.R. rail, first crossing E. of Chalk River station	510·76	511·52
	Base of C.P.R. rail, opposite Chalk River station	522·96	523·72
CCCCXCVII.	On S.E. end, stone foundation of turntable, Chalk River	521·45	522·23
	Base of C.P.R. rail, crossing W. end of Chalk River yard	517·84	518·59
594	On S.E. corner of C.P.R. culvert, 2·16 miles N. of Chalk River station	513·45	514·25
	Base of C.P.R. rail, opposite B.M. 594	516·36	517·13
	Base of C.P.R. rail, crossing, 5 miles W. of Chalk River	527·64	528·41
	Base of C.P.R. rail opposite Wylie station	527·75	528·53
595	On S.W. corner of culvert, 5·27 miles W. of Chalk River	525·21	526·02
	Base of C.P.R. rail, opposite B.M. 595	527·30	528·08
596	On boulder, 15 feet N.E. of track, 100 feet W. of culvert, 6·42 miles W. of Chalk River	526·77	527·58
	Base of C.P.R. rail, opposite B.M. 596	526·51	527·28
DV.	On W. side of S. abutment of bridge over W. branch of Chalk river	526·96	527·76
	Base of rail, centre of bridge, over W. branch of Chalk river	530·30	531·07
597	On N.W. corner of culvert, 8·91 miles W. of Chalk River	534·85	535·67
	Base of C.P.R. rail, opposite B.M. 597	536·86	537·64
	Base of C.P.R. rail, opposite Bass Lake station	587·87	588·66
DVI.	On N.E. corner of culvert, 10·32 miles W. of Chalk River	598·77	599·58
	Base of C.P.R. rail, opposite B.M. DVI	603·09	603·87
598	On boulder, close to N. rail, 12·62 miles W. of Chalk River	692·60	693·42
	Base of C.P.R. rail, opposite B.M. 598	692·54	693·32
599	On rock, S. side of gateway to McGee's hotel, Moor Lake stn.	634·59	635·41
	Base of C.P.R. rail, opposite Moor Lake station	635·59	636·39
DVII.	On rock E. of track, 90 feet S. of mile 16, W. of Chalk River	634·55	635·37
	Base of C.P.R. rail, opposite B.M. DVII	636·06	635·85
DVIII.	On S. end of W. face of culvert, 19·06 miles W. of Chalk River	563·63	563·47
	Base of C.P.R. rail, opposite B.M. DVIII	588·87	589·67
	Centre of overhead crossing, 21·12 miles W. of Chalk River	523·88	524·68
600	On N.W. corner of overhead crossing 21·12 miles W. of Chalk River	522·05	522·88
	Base of C.P.R. rail third crossing E. of Mackey station	472·94	473·76
601	On S.E. corner of trestle over Mackey creek	443·13	443·98
	Base of C.P.R. rail, centre of trestle over Mackey creek	442.68	443.50
	Base of C.P.R. rail, second crossing E. of Mackey station	437·06	437·87
	Base of C.P.R. rail, first crossing E. of Mackey station	430·16	430·97
	Base of C.P.R. rail, opposite Mackey station	431·07	431·88
DIX.	On rock close to S. rail 300 feet S.E. of mile post 25	427·53	428·38
	C.P.R. bench N. of track marked (403·27)	427·07	427·72
	Ottawa river level, May 30, 1905 opposite B.M. DIX	399·57	400·42
	Base of C.P.R. rail opposite B.M. DIX	424·73	425·60
	Brennan Lake level, May 30, 1905	417·13	417·98
	Base of C.P.R. rail at Rockliffe station	475·83	476·70
DXXI.	On rock, in N. fence line, 100 feet W. of C.P.R. station	474·17	475·02
	Base of C.P.R. rail, at Rockliffe crossing	478·46	479·29
	C.P.R. bench, S. of track, marked (468·99)	490·58	491·44
	Centre of C.P.R. culvert, marked 29·27 miles	484·68	485·50
	Base of rail, centre large culvert, marked 29·39 miles	463·09	468·92
DXX.	On S. end of W. wall of large culvert marked 29·89 miles	464·39	465·25
	C.P.R. bench, marked (471·11)	493·79	494·65
	Base of C.P.R. rail, opposite B.M. DXIX	508·35	509·17
DXIX.	On rock, S. of track, 1,300 feet W. of mile post 32	510·00	510·86
	Base of C.P.R. rail, opposite B.M. 603	551·16	552·00
603	On rock, S. of track, 690 feet E. of culvert, 33·57 miles	552·56	553·43
	Base of C.P.R. rail, opposite B.M. DXVIII	563·47	564·30
DXVIII.	On rock, S. of track, 545 feet W. of mile post 34	564·03	564·89
	C.P.R. bench, S. of track, marked (542·50)	565·05	565·92
	C.P.R. bench, S. of track, marked (584·66)	606·92	607·79
	Base of C.P.R. rail, opposite B.M. DXVII	603·18	604·02
DXVII.	On rock, N. of track, 1,500 feet E. of mile post 37	604·65	604·52
	Base of C.P.R. rail, crossing E. of Bissett station	563·52	564·37
	Base of C.P.R. rail, opposite Bissett station	548·65	549·50
	Base of C.P.R. rail, crossing at Bissett station	547·65	548·49

SESSIONAL PAPER No. 19a

VAUDREUIL to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Centre of bridge over Bissett river, marked 38·48 miles	559·41	560·25
DXXV.	On rock, at waters edge, foot of hill, ferry to Quebec shore	450·64	451·51
604	On rock, E. side of main road, 410 feet S. of road to Ottawa river	613·21	614·08
	Base of C.P.R. rail, main road crossing Bissetts	571·73	572·57
	C.P.R. bench, N. of track, marked (552·59)	574·77	575·64
	Base of C.P.R. rail, opposite B.M. DXVI	587·90	588·74
DXVI.	On rock, N. of track, 36 feet W. of mile 39, W. of Chalk River	588·37	589·24
	Centre of high trestle, 39·49 miles W. of Chalk River	611·19	612·04
	Base of C.P.R. rail, opposite B.M. DXV	646·17	647·01
DXV.	On rock, N. of track, 440 feet W. of mile 40, W. of Chalk River.	646·18	647·05
	Centre of C.P.R. culvert, 41·78 miles W. of Chalk River	706·02	706·86
	Base of C.P.R. rail, opposite B.M. DXIV	711·11	711·97
DXIV.	On rock, N. of track, 117 feet E. of mile 42, W. of Chalk River	711·37	712·25
	Centre of C.P.R. culvert, 42·13 miles W. of Chalk River	711·73	712·58
	Centre of C.P.R. culvert, 42·55 miles W. of Chalk River	712·21	713·07
	Centre of C.P.R. culvert, 42·83 miles W. of Chalk River	720·65	721·51
	Base of C.P.R. rail, opposite B.M. DXIII	719·85	720·71
DXIII.	On rock N. of track, 132 feet E. of mile 44, W. of Chalk River.	720·60	721·49
	Centre of C.P.R. culvert 44·19 miles W. of Chalk River	721·41	722·26
	Base of C.P.R. rail, opposite B.M. DXII	749·47	750·32
DXII.	On rock, S. of track, 70 feet W. of mile post 45	752·44	753·33
	C.P.R. bench, S. of track, marked (723·73)	745·53	746·43
	Base of C.P.R. rail, opposite B.M. 602	698·31	699·18
602	On rock, S. of track, 345 feet W. of mile 47 from Chalk River.	698·68	699·58
	Base of C.P.R. rail, opposite B.M. DXI	640·32	641·19
DXI.	On rock, N. of track, 720 feet W. of mile 48 from Chalk River.	643·80	644·69
	C.P.R. bench, N. of track, marked (610·64)	632·55	633·44
	Centre of trestle, 50·37 miles W. of Chalk River station	534·23	535 10
	C.P.R. bench, N. of track, marked (492·48)	514·52	515·42
	Base of C.P.R. rail, opposite Deux Rivieres station	519·11	519·99
DXXIV.	On rock, foot of cliff, 500 feet below remains of Ranson's house.	454·44	455·35
605	On rock, mouth of Deux Rivieres	466·51	467·41
	On rock, ¾ mile down Ottawa from B.M. DX	471·86	472·77
	On boulder down N. slope back of B.M DX	504·75	505·66
	Base of C.P.R. rail, opposite B.M DX, Deux Rivieres	513·32	514·20
DX.	On boulder, 10 feet N. of track, 38 feet E. of mile post 51	515·64	516·55
	Base of C.P.R. rail, first crossing W. of Deux Rivieres	497·93	498·80
DXXII.	On rock, 8 feet N. of track, 51·55 miles W. of Chalk River	496·53	497·44
	Base of C.P.R. rail, opposite B.M. DXXII	496·58	497·45
DXXIII.	On rock, 8 feet S. of track, 1,270 feet E. of mile 53	501·32	502·22
	Base of C.P.R. rail, opposite B.M. DXXIII	500·09	500·96
	C.P.R. bench marked (475·09)	496·87	497·77
	Centre of C.P.R. bridge over brook, marked 54·02 miles	497·23	498·11
606	On boulder, 9 feet S. of track, 280 feet E. of mile 55	498·82	499·72
	Base of C.P.R. rail, opposite B.M. 606	499·30	500·17
	C.P.R. bench marked (487·19)	507·13	508·03
DXXVI.	On rock, 8 feet S. of track, 180 feet E. of mile 56	510·36	511·28
	Base of C.P.R. rail, opposite B.M. DXXVI	511·04	511·92
DXXVII.	On rock, 9 feet S. of track, 16 feet W. of mile 57	510·43	511·34
	Base of C.P.R. rail, opposite B.M. DXXVII	508·40	509·29
DXXVIII.	On boulder, 10 feet S. of track, 525 feet W. of mile 58	496·75	497·66
	Base of C.P.R. rail, opposite B.M. DXXVIII	497·92	498·80
607	On rock, 20 feet N. of track, 1,800 feet W. of mile 59	495·21	496·12
	Base of C.P.R., rail, opposite B.M 607	499·43	500·31
DXXIX.	On boulder, 30 feet S. of track, 125 feet E. of mile 60	493·83	494·76
	Base of C.P.R. rail, opposite B.M. DXXIX	495·48	496·38
	Centre of C.P.R. bridge over brook, 61·48 miles from Chalk River	523·23	524·12
	C.P.R. bench, marked (501·47)	523·29	524·21
	Base of C.P.R. rail, opposite Klock station platform	528·46	529·35
DXXX.	On rock, W. end of Klock station platform	531·44	532·36
DXXXI.	On boulder, 20 feet S. of track, 445 feet E. of mile 63	565·56	566·48
	Base of C.P.R. rail, opposite B.M. DXXXI	566·55	567·44
	C.P.R. bench, marked (547·32)	569·19	570·11
608	On rock, 6 feet N. of track, 485 feet W. of mile 64	556·31	557·25
	Base of C.P.R. rail, opposite B.M. 608	557·12	558·02
	C.P.R. bench, marked (544·48)	566·35	567·27
DXXXII.	On rock, S. of track, 135 feet W. of mile 66, from Chalk River	568·41	569·34
	Base of C.P.R. rail, opposite B.M. DXXXII	567·03	567·94
DXXXIII.	On rock, 8 feet N. of track, 126 feet E. of mile 68	568·12	569·05
	Base of C.P.R. rail, opposite B.M. DXXXIII	568·25	569·15
609	On rock, 8 feet N. of track, 645 feet W. of mile 69	600·73	601·67
	Base of C.P.R. rail, opposite B.M. 609	601·17	602·09
DXXXIV.	On rock, 10 feet S. of track, 510 feet E. of mile post 70	591·36	592·30
	Base of C.P.R. rail, opposite B.M. DXXXIV	589·93	590·84
DXXXV.	On boulder, N. of track, at mile post 70	563·59	564·54
	Base of C.P.R. rail, opposite B.M. DXXXV	572·32	573·24
DXXXVI.	On boulder, on Ontario shore of Ottawa river, opposite mile 70.	500·53	501·47

VAUDREUIL to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Centre of C.P.R., overhead crossing of main road	569·25	570·17
	Base of C.P.R. rail, first crossing E. of Mattawa station	565·24	566·15
	C.P.R. bench, marked (544·91)	566·88	567·82
DXXXVII.	On flat rock, opposite Mattawa station	563·62	564·56
	Base of rail, opposite Mattawa station	562·41	563·32
	Centre of C.P.R. trestle over brook and road, marked 73·13	555·50	556·42
	Base of C.P.R. rail, second crossing W. of Mattawa station	563·96	564·89
DXXXVIII.	On boulder, 25 feet S. of track, 1,130 feet W. of mile post 74	594·52	595·48
	Base of C.P.R. rail, opposite B.M. DXXXVIII	594·63	595·55
DXXXIX.	On rock, 15 feet S. of track, 485 feet W. of mile post 26	630·43	631·38
	Base of C.P.R. rail, opposite B.M. DXXXIX	628·43	629·35
	C.P.R. bench, marked (610·11)	632·11	633·06
610	On rock, 15 feet S. of track, 460 feet E. of mile post 77	643·69	644·65
	Base of C.P.R. rail, opposite B.M. 610	643·58	644·50
DXL.	On rock, 8 feet N. of track, 505 feet W. of mile post 78	682·52	683·48
	Base of C.P.R. rail, opposite B.M. DXL	681·05	681·98
	Base of C.P.R. rail, W. end of Calvin siding crossing	686·09	687·02
	Base of C.P.R. rail, second crossing W. of Calvin siding	662·21	663·14
DXLI.	On rock, 15 feet N. of track, 600 feet E. of mile 80	629·03	630·00
	Base of rail, opposite B.M. DXLI	628·17	629·11
	Base of rail, centre of culvert, 80·09 miles W. of Chalk River	625·18	626·12
	Base of rail, centre of trestle, 80·54 miles W. of Chalk River	625·12	626·06
	Base of rail, third crossing W. of Calvin siding	624·47	625·40
DXLII.	On rock, 8 feet S. of track, 120 feet W. of mile 83	584·26	585·24
	Base of C.P.R. rail, opposite B.M. DXLII	582·99	583·94
	C.P.R. bench, marked (562·25)	584·63	585·58
	Centre of bridge over Amable du Fond river, 83·23 miles	576·73	577·67
	Base of rail, crossing, E. end of Eau Claire siding	588·99	589·94
DXLIII.	On rock, 3 feet N. of track, 1,280 feet E. of mile 84	590·20	591·18
	Base of C.P.R. rail, opposite B.M. DXLIII	590·41	591·39
	C.P.R. bench, marked (565·37)	591·65	592·63
	Base of C.P.R. rail, opposite B.M. DXLIII	590·44	591·39
	Base of C.P.R. rail, opposite Eau Claire station	591·77	592·72
	Base of C.P.R. rail, opposite B.M. DLX	623·80	624·75
DLX.	On rock, 12 feet N. of track, 1,025 feet E. of mile post 86	624·48	625·45
	C.P.R. bench, marked (643·99)	666·11	667·09
	Centre of C.P.R. trestle, 86·78 miles W. of Chalk River	663·93	664·88
	Base of C.P.R. rail, opposite B.M. DLIX	660·36	661·32
DLIX.	On rock, 8 feet S. of track, 745 feet E. of mile 87	662·58	663·56
	C.P.R. bench, marked (623·28)	645·74	646·73
	C.P.R. bench, marked (657·37)	679·82	680·81
	C.P.R. bench, marked (681·94)	704·40	705·39
	Base of rail, opposite B.M. DLVIII	702·14	703·10
DLVIII.	On rock, 8 feet S. of track, 2,800 feet E. of mile post 89	703·00	703·99
	Base of C.P.R. rail, opposite B.M. DLVII	756·84	757·80
DLVII.	On rock, 12 feet N. of track, 1,930 feet W. of mile 90	756·65	757·64
	Base of C.P.R. rail, first crossing E. of Rutherglen station	785·65	786·62
	Base of C.P.R. rail at Rutherglen station	788·71	789·68
	Base of C.P.R. rail, first crossing W. of Rutherglen station	785·26	786·23
	Centre of C.P.R. long trestle, 91·43 miles W. of Chalk River	782·44	783·40
	C.P.R. bench, marked (775·21)	799·00	800·00
	Base of C.P.R. rail, opposite B.M. 618	800·86	801·82
618	On rock, 30 feet N. of track, 320 feet E. of mile post 92	800·75	801·75
	Base of C.P.R. rail, third crossing E. of Bonfield station	778·88	779·85
	Centre of C.P.R. long trestle	780·61	781·58
	Base of C.P.R. rail, opposite B.M. DLVI	785·50	786·47
DLVI.	On rock, 8 feet S. of track, 65 feet W. of mile 93	785·50	786·50
	Base of C.P.R. rail, opposite B.M. 617	836·38	837·34
617	On boulder, 8 feet S. of track, 45 feet W. of mile 94	836·42	837·41
	Base of C.P.R. rail, second crossing E. of Bonfield station	842·50	843·47
	Base of C.P.R. rail, first crossing E. of Bonfield station	801·98	802·95
	Base of C.P.R. rail, opposite B.M. DLV	781·99	782·97
DLV.	On rock, 8 feet S. of track, 115 feet E. of mile post 96	784·34	785·34
	Base of C.P.R. rail, opposite B.M. DLIV	775·97	776·94
DLIV.	On boulder, 15 feet S. of track, 140 feet W. of mile post 98	776·04	777·04
	Base of C.P.R. rail, at Bonfield station	781·70	782·68
	Centre of C.P.R. bridge over Nasbonsing river	786·78	787·76
	Base of C.P.R. rail, opposite B.M. 616	787·51	788·49
616	On boulder, 25 feet S. of track, 52 feet E. of mile post 99	784·81	785·81
	C.P.R. bench, marked (758·77)	782·49	783·48
	Base of C.P.R. rail, opposite B.M. DLIII	784·25	785·24
DLIII.	On rock, 30 feet N. of track, 745 feet E. of mile post 100	782·44	783·45
	Base of C.P.R. rail, opposite B.M. 615	788·89	789·87
615	On boulder, 12 feet S. of track at mile post 101	790·13	791·14
	C.P.R. bench, marked (764·71)	788·38	789·37
	Base of C.P.R. rail, opposite B.M. DLII	785·01	785·99
DLII.	On boulder, 8 feet N. of track, 232 feet W. of mile post 102	785·00	786·01
	Base of C.P.R. rail, opposite Nasbonsing station	784·82	785·80
	C.P.R. bench, marked (762·85)	786·50	787·50

SESSIONAL PAPER No. 19a

VAUDREUIL to North Bay, &c.—Complete List of Bench Marks, &c.—*Concluded.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	C.P.R. bench, marked (760·67)	784·67	785·67
	Base of C.P.R. rail, opposite B.M. DLI	782·72	783·72
DLI.	On rock, 10 feet N. of track, 1,008 feet E. of mile 103	783·82	784·84
	Base of C.P.R. rail, first crossing W. of Nasbonsing	783·07	784·07
	C.P.R. bench, marked (754·09)	777·66	778·66
	Base of C.P.R. rail, second crossing W. of Nasbonsing	774·36	775·36
	Base of C.P.R. rail, opposite B.M. DL	772·52	773·52
DL.	On rock, 8 feet S. of track, 320 feet E. of mile 105	773·12	774·14
	Base of C.P.R. rail, opposite B.M. 614	769·73	770·72
614	On boulder, 4 feet N. of track, 46 feet E. of mile 106	770·06	771·09
	Base of C.P.R. rail, opposite B.M. DXLIX	738·96	739·96
DXLIX.	On boulder, 15 feet N. of track, 100 feet W. of mile 107	736·79	737·82
	Base of C.P.R. rail, opposite Corbeil crossing	733·78	734·79
	Base of C.P.R. rail, opposite Corbeil station	733·11	734·12
	C.P.R. bench, marked (699·87)	723·62	724·62
	Base of C.P.R. rail, opposite B.M. DXLVIII	722·45	723·45
DXLVIII.	On rock, 8 feet N. of track, 163 feet W. of mile 109	721·20	722·24
	Base of C.P.R. rail, opposite B.M. 613	718·77	719·77
613	On rock, 15 feet S. of track, 125 feet E. of mile post 110	717·60	718·63
	C.P.R. bench, marked (696·17)	720·09	721·13
	Base of C.P.R. rail, opposite B.M. DXLVII	709·38	710·39
DXLVII.	On rock, 12 feet N. of track, 255 feet E. of mile post 111	709·94	710·98
	Base of C.P.R. rail at Thorncliffe station	699·38	700·39
	Base of C.P.R. rail, opposite B.M. 612	666·29	667·31
612	On rock, 15 feet S. of track, 473 feet E. of mile post 113	663·51	664·56
	Base of C.P.R. rail, Nipissing Junction crossing	673·63	674·65
	Base of C.P.R. rail, junction of G.T.R. to Toronto	674·92	676·25
	Base of C.P.R. rail, second crossing E. of Chippewa creek	672·53	673·64
	C.P.R. bench, marked (642·69)	666·53	667·62
	Base of C.P.R. rail, opposite B.M. DXLVI	664·27	665·32
DXLVI.	On rock, N. of track, 717 feet W. of mile post 114	666·32	667·44
	Base of C.P.R. rail, opposite B.M. 611	653·54	654·55
611	On rock, 14 feet S. of track, 95 feet E. of mile 115	653·86	654·93
	C.P.R. bench, marked (630·87)	654·66	655·74
	Base of C.P.R. rail, opposite B.M. DXLV	649·82	650·81
DXLV.	On rock, 8 feet N. of track, 280 feet S. of mile post 116	651·94	652·99
	Centre of C.P.R. culvert, 116·19 miles W. of Chalk River	650·84	651·87
	C.P.R. bench on culvert, 116·19 miles W. of Chalk River (625·65)	649·49	650·55
	Base of C.P.R. rail, first crossing E. of Chippewa creek	651·38	652·37
	Coping, sixth altar step, W. end of S. abutment of Chippewa bridge	643·03	644·08
	Coping, fifth altar step, W. end of S. abutment of Chippewa bridge	645·03	646·08
	Coping, fourth altar step, W. end of S. abutment of Chippewa bridge	647·05	648·10
	Coping, third altar step, W. end of S. abutment of Chippewa bridge	649·04	650·09
	Coping, second altar step, W. end of S. abutment of Chippewa bridge	650·96	652·01
	Coping, first altar step, W. end of S. abutment of Chippewa bridge	652·98	654·03
	Centre of C.P.R. bridge over Chippewa creek, North Bay	653·00	654·05
I.	Inside edge coping, fourth altar step, W. end of S. abutment of bridge	645·01	646·05
DXLIV.	On W. end of S. abutment of bridge over Chippewa creek	649·66	650·71

TORONTO TO NORTH BAY VIA NEWMARKET, BARRIE, COLLINGWOOD, ORILLIA, MIDLAND, GRAVENHURST, BURK'S FALLS AND NIPISSING JUNCTION.

Bench Marks.	Location and Description.	Elevations. Instrumental.	Adjusted.
DCXIII.	On base, 24 feet from S. end of James St. face of Toronto City Hall...	296·96	296·96
	S. end of door step (level with basement floor), James St. entrance Toronto City Hall...	296·99	296·99
645	On pavement, close to S.W. corner of Government armouries, Toronto.	301·64	301·64
	Street level, intersection of Queen and Simcoe streets, Toronto.	295·66	295·66
	Street level, intersection of King and Simcoe streets, Toronto.	280·16	280·16
DCXIV.	On W. face of buttress at S.W. corner of old Union station, Toronto.	255·69	255·69
645¼	Top of plinth, fourth small buttress E. of tower, S. side old Union station.	258·62	258·62
	Base of S. rail of track No. 5, opposite exit of old Union station.	254·30	254·30
DCXV.	On W. base of fourth pier from N. abutment of bridge, foot of John street.	254·33	254·33
	Base of S. rail of first track N. of of John street bridge.	252·94	252·94
	Floor level, centre of John street bridge, Toronto.	279·69	279·69
DCXVI.	Opposite second altar step from ground, N. face E. end of S. abutment, Spadina bridge.	257·46	257·46
	Base of G.T.R. rail under bridge, foot of Spadina avenue.	254·81	254·81
	Floor level, centre of bridge, foot of Spadina avenue	277·82	277·82
	Base of G.T.R. rail at level crossing of Spadina avenue.	254·38	254·38
DCXVII.	On E. end of S. face of N. abutment of bridge, foot of Bathurst street.	271·57	271·57
'12'	City Eng. bench, E. face of N. abutment of bridge, foot of Bathurst street.	275·04	275·04
	Base of G.T.R. rail, under bridge, foot of Bathurst street.	256·19	256·19
	Floor level, centre of bridge, foot of Bathurst street	281·09	281·09
646	On small boulder, 6 feet from S. face W. end of Queen's wharf, Toronto.	251·28	251·28
	Zero of G.B. ship canal survey automatic gauge, summer of 1906.	242·87	242·87
	Zero of Toronto Hbr. Com'rs. gauge on S. face of Queen's wharf	245·00	245·00
	Zero of P.W. Dept. automatic gauge on Queen's wharf.	243·28	243·28
645½	On top of Toronto Hbr. Com'rs. gauge at 4·45 feet.	249·45	249·45
647	On S.W. corner of coping at portal of sewer opposite Queen's wharf.	254·44	254·44
	Base of N. rail of G.T.R. main track at Strachan ave., Toronto	278·36	278·36
	Base of S. rail of C.P.R. main track at Strachan ave., Toronto	279·11	279·11
	Street level, intersection of Strachan ave. and Queen street.	295·20	295·20
DCXVIII.	Under window, keeper's house, E. entrance, Prov. Insane Asylum.	297·64	297·64
648	Base of W. pillaster, keeper's house, E. entrance, Prov. Insane Asylum.	298·04	298·04
	Street level, opposite B.M. 648.	296·56	296·56
DCXIX.	On W. base, 31·8 feet from rear of Trinity College, Toronto.	304·68	304·68
649	On coping, S.E. corner of King street subway	293·96	293·96
	Base of G.T.R. rail, over centre of King street, Toronto.	291·89	291·89
	Base of G.T.R. rail, opposite N. Parkdale station.	304·30	304·30
	Base of C.P.R. rail, opposite Parkdale station.	305·36	305·36
	Base of G.T.R. main track, over Queen street.	306·46	306·46
650	On coping of N. wall of Queen St. subway, close to G.T.R. east rail.	306·14	306·14
651	On bridge seat, N. wall of Queen St. subway, close to G.T.R. east rail.	303·16	303·16
	Base of C.P.R. rail at Brock ave., Toronto.	317·58	317·58
	Base of G.T.R. rail at Brock ave., Toronto.	319·87	319·87
	Base of G.T.R. rail at North Bay line at Brock street.	316·45	316·45
DCXX.	On base, centre of E. face of W. abutment of bridge, Dundas street.	352·94	352·94
	Base of G.T.R. rail, under Dundas street bridge.	350·74	350·74
	Base of C.P.R. rail, under Dundas street bridge.	350·59	350·59
	Floor level, centre of Dundas street bridge.	375·00	375·00
"121"	City Eng. bench on W. end of iron truss, W. end of W. side Dundas bridge.	377·08	377·08
	Base of G.T.R. rail, at Bloor street crossing.	370·53	370·53
	Base of C.P.R. rail, at Bloor street crossing	372·07	372·07
	Base of G.T.R. rail, Royce Avenue crossing.	389·45	389·45
	Base of C.P.R. rail, at Royce Avenue.	389·20	389·20
	Base of G.T.R. rail at crossing of C.P.R. line to N. Toronto.	396·40	396·40
	Base of C.P.R. rail at Toronto Junction station.	394·17	394·17

Toronto to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
DCXXI.	On N. stone base, S. end of bridge over Weston road	396·63	396·63
	Base of C.P.R. rail, under bridge over Weston road	394·97	394·97
	Base of C.P.R. rail, Osler Avenue crossing	396·70	396·70
652	On E. end of S. wall of C.P.R. culvert, 18 ft. W. of G.T.R. line to North Bay	393·87	393·87
	Base of C.P.R. rail, at crossing of G.T.R. line to North Bay	398·18	398·18
	Base of C.P.R. rail, at crossing of Lansdowne Avenue	398·05	398·05
	Base of C.P.R. rail, at crossing of Dufferin Avenue	399·97	399·97
	Base of C.P.R. rail, at crossing of Bartlett Avenue	401·65	401·65
	Base of C.P.R rail, at crossing of Dovercourt Avenue	402·89	402·89
653	On W. end of S. wall of culvert at Ossington Avenue	400·74	400·74
	Base of C.P.R. rail, at crossing of Ossington Avenue	402·67	402·67
	Base of C.P.R. rail, at crossing at Shaw street	402·46	402·46
	Base of C.P.R. rail, at crossing of Bathurst street	404·92	404·92
	Base of C.P.R. rail, at crossing of Newport road	406·47	406·47
	Base of C.P.R. rail, at crossing of Avenue road	401·31	401·31
	Base of C.P.R. rail, at crossing of North Toronto station	403·85	403·85
654	On W. end of step, 1st door E. of bay window, North Toronto station	405·73	405·73
DCXXII.	On base E. face of North Toronto station	407·26	407·26
	Base of C.P.R. rail, at crossing of Yonge street	405·51	405·51
	Street level, intersection of Bloor street and Queen's park driveway	375·89	375·89
	Pavement centre porch W. entrance of Parliament Buildings	359·70	359·70
DCXXIII.	On base, 28 ft. from front W. face of Parliament Buildings	359·65	359·65
	Pavement, foot main entrance steps of Parliament Buildings	359·85	359·85
	Floor level, main entrance of Parliament Buildings	368·82	368·82
DCXXIV.	On base between 2nd and 3rd window, N. end of T.U.B. Dept. building	347·79	347·79
	Street level, intersection of College Avenue and Queen's Park driveway	333·92	333·92
	Base of G.T.R. rail, at crossing of Davenport road	412·67	412·67
	Base of G.T.R. rail, at Davenport station	414·75	414·75
	Base of G.T.R. rail, at crossing of Ste. Claire Avenue	426.23	426.23
DCXXV.	On S. face of E. end of G.T.R. culvert, at the worsted and braid factory	432·60	432·60
	Base of G.T.R. rail, opposite B.M. DCXXV	440 11	400·11
	Base of G.T.R. rail, under Fairbank road crossing	495·67	495·68
655	On N. end of E. wall of culvert, 1,500 ft. S. of Downsview station	547·21	547·22
	Base of G.T.R. rail, opposite B.M. 655	556·21	556·22
	Base of G.T.R. rail, at Downsview flag station	576·13	576·14
	Base of G.T.R. rail, at Downsview crossing	576·78	576·79
DCXXVI.	On N. end of E. wall of culvert, 130 ft. N. of N. end of Downsview siding	567·82	567·84
	Base of G.T.R. rail, opposite B.M. DCXXVI	580·07	580·09
	Base of G.T.R. rail, at Downsview flag station	613·16	613·18
	Base of G.T.R. rail, at Downsview crossing	613·95	613·97
656	On W. end coping of culvert, 300 ft. S. of road to Lansing	643·80	643·82
	Base of G.T.R. rail, opposite B.M. 656	646·71	646·73
	Base of G.T.R. rail, at cross road to Lansing	644·99	645·01
DCXXVII.	On N. end of E. wall of culvert, ½ mile S. of Elia flag station	632.26	632.29
	Base of G.T.R. rail, opposite B.M. DCXXVII	638·75	638·78
657	On N.E. corner of culvert, ¼ mile S. of Elia flag station	638·15	638·18
	Base of G.T.R. rail, opposite B.M. 657	639·08	639·09
	Base of G.T.R. rail, opposite Elia flag station	643·76	643·79
	Base of G.T.R. rail, opposite Elia crossing	648·49	648·52
658	Centre of coping, E. end of culvert, opposite James Brooks' property	652·33	652·37
	Base of G.T.R. rail, opposite B.M. 658	662·24	662·28
	Base of G.T.R. rail, at 1st crossing of Vaughan township	656·87	656·91
DCXXVIII.	On S. inner face of top of W. end of culvert, at Thornhill crossing	623·82	623·86
659	On S. end of W. wall of culvert, S. of Thornhill crossing	624.79	624.83
	Base of G.T.R. rail, opposite B.M. 659	630·57	630·61
	Base of G.T.R. rail, at Thornhill crossing	629·74	629·78
	Base of G.T.R. rail, at Thornhill station	630.19	630·23
660	On S. end of E. wall of culvert, 1 mile N. of Thornhill station	654·87	654·92
	Base of G.T.R. rail, opposite B.M. 660	663.83	663.88
	Base of G.T.R. rail, 1st crossing N. of Thornhill station	667·12	667·17
DCXXIX.	On S. end of E. wall of culvert, opposite lot 15, Keffer's property	712·49	712·54
	Base of G.T.R. rail, opposite B.M. DCXXIX	716·93	716·98
	Base of G.T.R. rail, at crossing to Carpville	724·38	724·43
	Base of G.T.R. rail, at crossing to Maple	803·00	803·06
	Base of G.T.R. rail, at Maple station	812.76	812·82
	Base of G.T.R. rail, 1st crossing N. of Maple station	879·42	879·48
	Base of G.T.R. rail, 2nd crossing N. of Maple station	891·74	891·80
DCXXX.	On W. face of culvert, 115 ft. N. of mile post 26½	911·85	911·92

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail, opposite B.M. DCXXX	934·83	934·90
	Base of G.T.R. rail, 3rd crossing N. of Maple station	957·39	957·46
661	On S. end of E. wall of culvert, opposite lot 31, con. IV, Vaughan township	958·33	958·40
	Base of G.T.R. rail, opposite B.M. 661	970·02	970·09
	Base of G.T.R. rail, 4th crossing N. of Maple station	980·97	981·05
	Base of G.T.R. rail, opposite King station	956·38	956·46
	Base of G.T.R. rail, opposite King crossing	957·43	957·51
DCXXXI.	On N. end of W. face of culvert, 1,300 ft. N. of King station	947·50	947·58
	Base of G.T.R. rail, opposite B.M. DCXXXI	963·72	963·80
	Base of G.T.R. rail, 2nd crossing N. of King station	977·76	977·84
	Base of G.T.R. rail, 3rd crossing N. of King station	979·62	979·70
DCXXXII.	On S. end of W. wall of culvert, 150 ft. S. of mile 24–203	961·37	961·45
	Base of G.T.R. rail, opposite B.M. DCXXXII	970·10	970·18
	Base of G.T.R. rail, 4th crossing N. of King station	960·21	960·30
DCXXXIII.	On N. end of W. wall of culvert, 1,060 ft. N. of mile 25–202	944·65	944·74
	Base of G.T.R. rail, opposite B.M. DCXXXIII	953·44	953·53
	Base of G.T.R. rail, at crossing of Schomberg railway	979·40	979·49
	Base of G.T.R. rail, 5th crossing N. of King station	986·96	987·05
	Base of G.T.R. rail, 6th crossing N. of King station	1,002·17	1,002·26
DCXXXIV.	On W. end of N. wall of culvert, 450 ft. S. of mile 28–199	965·64	965·74
	Base of G.T.R. rail, opposite B.M. DCXXXIV	971·04	971·14
	Base of G.T.R. rail, 7th crossing N. of King station	935·64	935·74
	Base of G.T.R. rail, at Yonge street crossing	932.72	932·82
662	On N.E. base of support, at Metropolitan Electric Railway crossing	930·75	930·85
663	On N.W. base of support, at Metropolitan Electric Railway crossing	930·75	930·85
	Base of G.T.R. rail, under centre of Metropolitan Railway	929·10	929·20
DCXXXV.	4·7 ft. from S.E. corner of Aurora shoe factory	884·65	884·76
	Base of G.T.R. rail, opposite Aurora station	882·68	883·79
	Base of G.T.R. rail, at Wellington street crossing	882.88	882·99
DCXXXVI.	On W. end of N. wall of culvert, 735 ft. N. of mile 31–196	843·61	843.72
	Base of G.T.R. rail, opposite B.M. DCXXXVI	850·78	850·89
	Base of G.T.R. rail, main road crossing	831·70	831·81
DCXXXVII.	On W. end of S. wall of culvert, 1,270 ft. S. of mile 32–195	807·71	807·83
	Base of G.T.R. rail, opposite B.M. DCXXXVII	818·66	818·78
DCXXXVIII.	On W. end of S. wall of culvert, 2,260 ft. N. of mile 32–195	809·13	809·25
	Base of G.T.R. rail, opposite B.M. DCXXXVIII	812·50	812·62
	Base of G.T.R. rail, at crossing	805·26	806·08
	Base of G.T.R. rail, at crossing of Water street	787·72	787·84
	Base of G.T.R. rail, at crossing of Timothy street	781·84	781·97
	Centre of G.T.R. bridge, over Holland river at Newmarket	781·01	781·14
DCXXXIX.	On E. face of N. abutment of G.T.R. bridge over Holland river	777·28	777·41
	Base of G.T.R. rail, under overhead crossing, Queen street	773.05	773·18
	Base of G.T.R. rail, opposite Newmarket station	769·83	769·96
	Base of G.T.R. rail, 1st crossing N. of Newmarket station	770·35	770·48
	Base of G.T.R. rail, 2nd crossing N. of Newmarket station	766·17	766·30
	Base of G.T.R. rail, 3rd crossing N. of Newmarket station	762·56	762·69
	Base of G.T.R. rail, under overhead crossing	761·00	761·14
DCLV.	On base of N.E. support of overhead crossing	761·67	761·81
	Base of G.T.R. rail, 4th crossing S. of Holland Landing station	756·43	756·57
	Base of G.T.R. rail, opposite B.M. DCLIV	745·85	745·99
DCLIV.	On E. face of culvert, 2,150 ft. S. of mile post 38–179	740·66	740·80
	Base of G.T.R. rail, 3rd crossing S. of Holland Landing station	745·59	745·73
	Base of G.T.R. rail, 2nd crossing S. of Holland Landing station	742·96	743·10
	Base of G.T.R. rail, 1st crossing S. of Holland Landing station	741·54	741·68
	Base of G.TR. rail, opposite Holland Landing station	741·56	741·70
666½	Brass headed nail on W. side of track, N. side of crossing	738·40	738·54
	Base of G.T.R. rail, 7th crossing S. of Bradford station	741·19	741·33
	Base of G.T.R. rail, 6th crossing S. of Bradford station	740·91	741.06
	Base of G.T.R. rail, 5th crossing S. of Bradford station	741·58	741·73
	Base of G.T.R. rail, 4th crossing S. of Bradford station	737·73	737·88
	Base of G.T.R. rail, 3rd crossing S. of Bradford station	734·32	734·47
	Base of G.T.R. rail, 2nd crossing S. of Bradford station	727·81	727·96
	Base of G.T.R. rail, 1st crossing S. of Bradford station	724·57	724·73
	Base of G.T.R. rail, centre of bridge over Holland river	724·40	724·56
	Base of G.T.R. rail, opposite Bradford station	724·11	724·27
	Base of G.T.R. rail, opposite B.M. DCLIII	733·25	733·41
DCLIII.	On W. face of culvert, 570 ft. N. of mile 43–184	726·16	726·32
	Base of G.T.R. rail, opposite B.M. 666	737·96	738·13
666	On E. end of S. wall, culvert 1,785 ft. N. of mile post 45–182	737·04	737·21
	Base of G.T.R. rail, 5th crossing S. of Gilford station	740.21	740.38
	Base of G.T.R. rail, 4th crossing S. of Gilford station	742·23	742·41
	Base of G.T.R. rail, opposite B.M. DCLII	746·10	746.28
DCLII.	On W. face of culvert, 990 ft. S. of mile post 46–181	742·05	742.23

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of C.P.R. rail, 3rd crossing S. of Gilford station	739·52	739·69
	Base of C.P.R. rail, 2nd crossing S. of Gilford station	755·37	755·55
	Base of C.P.R. rail, opposite B.M. DCLI	754·51	754·70
DCLI.	On W. face of culvert, 400 ft. S. of mile post 48–179	751·24	751·43
	Base of G.T.R. rail, 1st crossing S. of Gilford station	754·97	755·16
	Base of G.T.R. rail, opposite Gilford station	750·47	750·66
	Base of G.T.R. rail, first crossing N. of Gilford station	750·31	750·50
	Base of G.T.R. rail, second crossing N. of Gilford station	750·08	750·27
665½		720·99	721·18
	Base of G.T.R. rail, opposite B.M. DCL	750·73	750·97
DCL.	On W. face of culvert, 2,485 feet S. of mile post 50–177	747·49	747·68
	Base of G.T.R. rail, opposite crossing	777·78	777·98
	Base of G.T.R. rail, opposite B.M. DCXLIX	777·65	777·85
DCXLIX.	On W. face of culvert, 1,785 feet N. of mile post 50–177	775·02	775·22
	Base of G.T.R. rail, opposite crossing	759·62	759·82
	Base of G.T.R. rail, opposite B.M. DCXLVIII	759·54	759·74
DCXLVIII.	On S. end of W. face of culvert, 980 feet N. of mile 51–176	754·84	755·04
	Base of G.T.R. rail, opposite Lefroy station	768·80	769·00
	Base of G.T.R. rail, opposite Lefroy crossing	764·99	765·19
	Base of G.T.R. rail, opposite B.M. DCXLVII	761·78	761·98
DCXLVII.	On N.E. corner of culvert, 188 feet N. of mile 52–175	757·50	757·70
	Base of G.T.R. rail, opposite B.M. 665	766·63	766·84
665	On centre of W. end of culvert, 1,900 feet S. of mile 53–174	765·75	765·96
	Base of G.T.R. rail, sixth crossing S. of Craigvale station	774·58	774·79
	Base of G.T.R. rail, opposite B.M. DCXLVI	778·48	778·69
DCXLVI.	On N. end of E. face of culvert, 2,085 feet S. of mile 54–173	769·06	769·27
	Base of G.T.R. rail, under overhead crossing	792·68	792·89
	Base of G.T.R. rail, opposite B.M. DCXLV	819·86	820·07
DCXLV.	On N. end of E. face of culvert, 1,845 feet S. of mile 55–172	813·43	813·64
	Base of G.T.R. rail, fifth crossing, S. of Craigvale station	819·67	819·88
	Base of G.T.R. rail, fourth crossing S. of Craigvale station	863·53	869·75
	Base of G.T.R. rail, third crossing S. of Craigvale station	875·12	875·34
	Base of G.T.R. rail, opposite B.M. DCXLIV	896·27	896·49
DCXLIV.	On boulder, 6 feet W. of track, 836 feet N. of mile 56–171	895·33	895·55
	Base of G.T.R. rail, second crossing, S. of Craigvale station	887·04	887·26
	Base of G.T.R. rail, opposite B.M. DCXLIII	876·94	877·17
DCXLIII.	On N. end of W. face of culvert, 1,200 feet S. of Craigvale station	866·24	866·47
	Base of G.T.R. rail, at Craigvale station crossing	877·70	877·93
	Base of G.T.R. rail at Craigvale station	879·31	879·54
	Base of G.T.R. rail, first crossing N. of Craigvale station	875·77	876·00
	Base of G.T.R. rail, second crossing N. of Craigvale station	852·13	852·37
	Base of G.T.R. rail, opposite B.M. DCXLII	846·50	846·74
DCXLII.	On N. end of W. face of culvert, 665 feet S. of mile post 60–167	839·12	839·36
	Base of G.T.R. rail, opposite B.M. 664	840·18	840·42
664	On N.W. base of overhead crossing, 2,540 feet S. of mile 61–166	840·43	840·67
	Centre of bridge over Lovers creek	793·83	794·07
DCXLI.	On W. end of N. abutment of bridge over Lovers creek	789·41	789·65
	Base of G.T.R. rail, under first overhead crossing	782·44	782·68
	Base of G.T.R. rail, first crossing S. of Allandale station	759·21	759·46
	Base of G.T.R. rail, opposite Allandale station	734·17	734·42
	Base of G.T.R. rail, opposite Barrie station	725·65	725·92
DCXL.	On base, centre of rear wall of Barrie post office	732·18	732·44
DCLVI.	On N.W. foundation of James Groghon's house, Dunlop street	758·56	758·82
	Base of G.T.R. rail, fourth crossing E. of Colwell Junction	766·31	766·58
	Base of G.T.R. rail, third crossing E. of Colwell Junction	762·23	762·51
	Base of G.T.R. rail, second crossing E. of Colwell Junction	746·98	747·26
DCLVII.	On S. end of W. wall of culvert, 153 feet E. of semaphore, Colwell	732·51	732·79
	Base of G.T.R. rail, opposite B.M. DCLVII	737·58	737·86
	Base of G.T.R. rail, first crossing E. of Colwell station	744·50	744·78
	Base of G.T.R. rail, opposite Colwell station	748·09	748·37
	Base of G.T.R. rail, first crossing W. of Colwell station	717·63	717·92
	Base of G.T.R. rail, crossing of C.P.R. to Sudbury	703·72	704·01
	Base of G.T.R. rail, opposite Utopia station	691·15	691·45
	Base of G.T.R. rail, opposite Utopia crossing	690·58	690·88
DCLVIII.	On S. end of E. wall of culvert, 900 feet E. of mile 72–43	633·86	640·16
	Base of G.T.R. rail, opposite B.M. DCLVIII	658·16	658·46
	Base of G.T.R. rail, second crossing W. of Utopia station	645·74	646·04
DCLIX.	On S. face of E. abutment of bridge over Nottawasaga river	628·83	629·13
	Centre of G.T.R. bridge over Nottawasaga river	630·48	630·78
	Base of G.T.R. rail, first crossing E. of Angus station	629·42	629·72
DCLX.	On S. face of E. abutment of bridge over Pine river	621·28	621·59
	Centre of G.T.R. bridge over Pine river	623·10	623·42
	Base of G.T.R. rail, opposite station, Angus	626·99	627·30
	Base of G.T.R. rail, opposite crossing, Angus	625·73	626·04
	Base of G.T.R. rail, second crossing W. of Angus station	625·69	626·00
	Base of G.T.R. rail, third crossing W. of Angus station	633·19	633·50
	Centre of G.T.R. bridge over Mad river	627·06	627·37

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
DCLXI.	On S. face of W. abutment, bridge over Mad river	625·52	625·83
	Base of G.T.R. rail, first crossing E. of Brentwood station	624·43	624·74
	Base of G.T.R. rail, opposite Brentwood station	645·23	645·55
	Base of G.T.R. rail, opposite Brentwood crossing	645·91	646·23
	Base of G.T.R. rail, second crossing W. of Brentwood	652·63	652·95
	Base of G.T.R. rail, third crossing W. of Brentwood,	666·53	666·85
DCLXII.	On S. end of E. face of culvert over Cooks brook	655·41	655·73
	Base of G.T.R. rail, opposite B.M. DCLXII	679·63	679·96
	Base of G.T.R. rail, New Lowell crossing	684·27	684·60
	Base of G.T.R. rail, New Lowell station	687·09	687·42
	Base of G.T.R. rail, first crossing W. of New Lowell station	705·40	705·73
	Base of G.T.R. rail, second crossing W. of New Lowell station.	720·07	720·40
	Base of G.T.R. rail, third crossing W. of New Lowell station.	727·09	727·43
	Base of G.T.R. rail, fourth crossing W. of New Lowell station.	722·12	722·46
DCLXIII.	On W. face of boulder, 2,590 feet N. of mile post 82–33	710·92	711·26
	Base of G.T.R. rail, opposite B.M. DCLXIII	714·60	714·94
	Base of G.T.R. rail, fifth crossing W. of New Lowell station	715·88	716·22
	Base of G.T.R. rail, sixth crossing W. of New Lowell station.	711·49	711·84
	Base of G.T.R. rail, seventh crossing W. of New Lowell station.	710·40	710·75
	Base of G.T.R. rail, eighth crossing W. of New Lowell station.	711·22	711·57
DCLXIV.	On S. end of E. wall of culvert, 237 feet E. of mile 85–30	700·05	700·40
	Base of G.T.R. rail, opposite B.M. DCLXIV	711·83	712·18
	Base of G.T.R. rail, first crossing E. of Stayner station	713·41	713·77
	Base of G.T.R. rail, opposite Stayner station	713·51	713·87
	Base of G.T.R. rail, first crossing W. of Stayner station	713·50	713·86
DCLXV.	On S. end of E. wall of culvert, 755 feet W. of mile 86–29	702·46	702·82
	Base of G.T.R. rail, opposite B.M. DCLXV	711·46	711·82
	Base of G.T.R. rail, second crossing W. of Stayner station	713·55	713·91
	Base of G.T.R. rail, third crossing W. of Stayner station	713·74	714·10
667	On boulder, 10 feet S. of track, 1,645 feet W. of mile 88–27	718·23	718·60
	Base of G.T.R. rail, opposite B.M. 667	719·03	719·40
	Base of G.T.R. rail, fourth crossing W. of Stayner station	719·39	719·76
	Base of G.T.R. rail, fifth crossing W. of Stayner station	719·79	720·16
	Base of G.T.R. rail, sixth crossing W. of Stayner station	699·16	699·54
DCLXVI.	On S. face of E. abutment of bridge over Batteaux river	685·62	686·00
	Centre of bridge over Batteaux river	686·03	686·41
	Base of G.T.R. rail, at Batteaux crossing	685·18	685·56
	Base of G.T.R. rail at Batteaux station	684·23	684·61
	Base of G.T.R. rail, first crossing W. of Batteaux station	676·49	676·87
	Base of G.T.R. rail, second crossing W. of Batteaux station	640·62	641·01
DCLXVII.	On S.E. corner of E. wall of bridge over Pretti river	637·73	638·12
	Centre of bridge over Pretti river	637·69	638·08
	Base of G.T.R. rail at Hume street, Collingwood	604·75	605·14
	Base of G.T.R. rail at Ontario street, Collingwood	595·18	595·58
DCLXVIII.	On base, front of Collingwood station	590·55	590·95
	Base of G.T.R. rail, opposite Collingwood station	589·32	589·72
DCLXIX.	On S.E. corner of Collingwood dock pumphouse	584·79	585·19
668½	Iron rivet, N.E. corner of Collingwood dock pumphouse	587·40	587·80
	Zero of G.B.S.C., Survey automatic gauge, summer of 1906	581.74	581.74
	Base of G.T.R. rail at Mulcaster street crossing	722·92	723·18
668	On timber, W. end of culvert, 2,570 feet E. of mile 64–163	719·11	719·37
DCLXX.	On S. face of E. wall of culvert, 360 feet E. of mile 65–162	732·57	732·83
	Base of G.T.R. rail, opposite B.M. DCLXX	734·47	734·73
DCLXXI.	On S. face of W. abutment of culvert, 625 feet W. of mile 66–161	744·92	745·18
	Centre of overhead crossing	747·64	747·90
	Base of G.T.R. rail, first crossing W. of Barrie	758·41	758·67
DCLXXII.	On N. face of W. wall of culvert, 730 feet E. of mile 67–260	762·32	762·59
	Base of G.T.R. rail, opposite B.M. DCLXXII	771·14	771·41
	Base of G.T.R. rail, second crossing W. of Barrie	777·15	777·42
	Base of G.T.R. rail, third crossing W. of Barrie	788·46	788·73
DCLXXIII.	On S. face of E. wall of culvert, 1,760 feet E. of mile 68–159	789·41	789·68
	Base of G.T.R. rail, opposite B.M. DCLXXIII	791·71	791·98
	Base of G.T.R. rail, opposite Parklands station	799·86	800·13
	Base of G.T.R. rail, opposite Parklands crossing	801·53	801·80
	Base of G.T.R. rail, second crossing W. of Parklands	811·38	811·66
	Base of G.T.R. rail, third crossing W. of Parklands	817·52	817·80
	Base of G.T.R. rail, opposite Gowan station	817·35	817·63
DCLXXIV.	On N. face of W. wall of culvert, 25 feet E. of mile 70–157	813·12	813·40
	Base of G.T.R. rail, opposite B.M. DCLXXIV	817·03	817·31
	Base of G.T.R. rail, first crossing W. of Gowan station	834·54	834·82
	Base of G.T.R. rail, second crossing W. of Gowan station	815·52	815·81
DCLXXV.	On S. end of E. wall of culvert, 720 feet W. of mile 72–155	797·69	797·98
	Base of G.T.R. rail, opposite B.M. DCLXXV	804·97	805·26
	Base of G.T.R. rail, third crossing W. of Gowan station	795·04	795·33
DCLXXVI.	On N. end of W. wall of culvert, 1,095 feet E. of mile 73–154	773·84	774·13
	Base of G.T.R. rail, opposite B.M. DCLXXVI	782·58	782·87
	Base of G.T.R. rail, fourth crossing W. of Gowan station	779·22	779·51
669	On N. end of E. wall of culvert	779·15	779·45

SESSIONAL PAPER No. 19a

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail, opposite B.M. 669	780·88	781·18
	Base of G.T.R. rail, at Oro station crossing	788·88	789·18
	Base of G.T.R. rail at Oro station	789·01	789·31
DCLXXVII.	On S. end of E. wall of culvert, 2,434 feet W. of mile 76–151	796·24	796·54
	Centre of culvert at B.M. DCLXXVII	800·86	801·16
	Base of G.T.R. rail, first crossing W. of Oro station	797·63	797·94
DCLXXVIII.	On N. end of W. wall of culvert, 1,935 feet W. of mile 77–150	796·67	796·98
	Centre of culvert at B.M. DCLXXVIII	799·50	799·81
	Base of G.T.R. rail, second crossing W. of Oro station	795·91	796·22
DCLXXIX.	On S. end of W. wall of culvert, 170 feet E. of mile 78–149	779·09	779·40
670	On S. end of W. wall of culvert, 170 feet E. of mile 78–149	781·11	781·91
671	On S. end of W. wall of culvert, 170 feet E. of mile 78–149	781·10	781·42
	Centre of culvert, 170 feet E. of mile 78–149	781·60	781·91
	Base of G.T.R. rail, opposite Hawkestone crossing	781·11	781·42
	Base of G.T.R. rail, opposite Hawkestone station	780·12	780·43
	Base of G.T.R. rail, first crossing N. of Hawkestone station	784·30	784·62
	Base of G.T.R. rail, second crossing N. of Hawkestone station	793·47	793·79
DCLXXX.	On N. face of E. end of culvert, 1,132 feet W. of mile post 80–147	791·10	791·42
	Base of G.T.R. rail at B.M. DCLXXX	796·08	796·40
	Base of G.T.R. rail, crossing between Oro and Orillia townships	815·51	815·84
DCLXXXI.	On E. end of N. wall of culvert, 1,435 feet N. of mile 82–145	733·06	733·39
	Base of G.T.R. rail at B.M. DCLXXXI	737·01	737·34
	Base of G.T.R. rail, third crossing, N. of Oro station	732·48	732·81
	Base of G.T.R. rail, fourth crossing N. of Oro station	723·62	723·96
DCLXXXII.	On base, 4½ feet from W. corner, front of W. wing of Orillia Insane Asylum	785·68	786·02
	Base of G.T.R. rail, opposite platform of Orillia Insane Asylum	729·36	729·70
	Base of G.T.R. rail, first crossing N. of platform of Orillia Insane Asylum	723·88	724·23
	Base of G.T.R. rail, second crossing N. of platform of Orillia Insane Asylum	724·73	725·08
	Base of G.T.R. rail, third crossing N. of platform of Orillia Insane Asylum	723·84	724·19
	Base of G.T.R. rail at Front street crossing, Orillia	724·44	724·79
	Base of G.T.R. rail at Orillia station	723·46	723·81
673	On W. end of wooden culvert, 450 feet N. of Orillia station	721·37	721·72
	Base of G.T.R. rail, opposite B.M. 672	726·34	726·69
	Base of G.T.R. rail, first crossing N. of Orillia station	734·67	735·02
	Base of G.T.R. rail, second crossing N. of Orillia station	728·02	728·37
	Base of G.T.R. rail, third crossing N. of Orillia station	726·49	726·84
	Centre of G.T.R., over Narrows, Couchiching lake	726·71	727·06
674	On S.E. corner of concrete turntable, Atherley highway bridge	721·91	722·26
	Centre of highway bridge, Narrows, Lakes Couchiching-Simcoe	727·08	727·43
	Base of G.T.R. rail at Atherley junction	725·79	726·14
DCLXXXIII.	On E. end of N. wall of culvert, 162 feet N. of mile post 90–137	724·68	725·03
675	On E. end of N. wall of culvert, 162 feet N. of mile post 90–137	727·16	727·51
676	On E. end of N. wall of culvert, 162 feet N. of mile post 90–137	727·12	727·47
	Base of G.T.R. rail, opposite B.M. DCLXXXIII	727·42	727·77
	Base of G.T.R. rail, main road crossing	727·54	727·89
	Base of G.T.R. rail, third crossing S. of Rama station	730·86	731·21
DCLXXXIV.	On E. end of S. wall, 1,055 feet S. of mile 91–136	722·53	722·87
	Base of G.T.R. rail, opposite B.M. DCLXXXIV	725·79	726·13
	Base of G.T.R. rail, second crossing S. of Rama station	736·73	737·07
DCLXXXV.	On W. end of S. wall of culvert, 775 feet N. of mile 92–135	733·82	734·16
	Base of G.T.R. rail, opposite B.M. DCLXXXV	738·13	738·47
677	On W. end of S. wall of culvert, 775 feet N. of mile 92–135	737·33	737·67
678	On W. end of S. wall of culvert, 775 feet N. of mile 92–135	737·33	737·67
	Base of G.T.R. rail at Rama station crossing	739·03	739·37
	Base of G.T.R. rail at Rama station	739·11	739·45
	Base of G.T.R. rail, first crossing N. of Rama station	723·41	723·75
DCLXXXVI.	On W. end of S. wall of culvert, 1,735 feet N. of mile 93–134	719·96	720·30
	Base of G.T.R. rail, opposite B.M. DCLXXXVI	723·60	723·94
	Base of G.T.R. rail at Longford station	732·57	732·91
	Base of G.T.R. rail at Longford station crossing	734·50	734·84
DCLXXXVII.	On rock, 60 feet E. of tracks, opposite mile post 94–133	729·65	729·99
	Base of G.T.R. rail, opposite B.M. DCLXXXVII	732·59	732·93
672	On W. end of wooden culvert, 450 feet N. of Orillia station	722·37	722·72
	Base of G.T.R. rail at Orillia station, branch to Midland	723·50	723·85
	Base of G.T.R rail at Elgin street crossing, Orillia	724·23	724·58
	Base of G.T.R. rail at Colborne street crossing, Orillia	725·39	725·74
	Base of G.T.R. rail at Mississaga street crossing, Orillia	724·85	725·20
DCLXXXVIII.	On N. end of front of Vick's flour mill, Tecumseh street	731·05	731·40
	Base of G.T.R. rail at Tecumseh St. crossing, Orillia	729·07	729·42
	Base of G.T.R. rail at Comice street, Orillia	732·90	733·25
	Base of G.T.R. rail at Jarvis street, Orillia	736·97	737·32
	Base of G.T.R. rail at Boland street, Orillia	740·30	740·65
	Base of G.T.R. rail at Cedar street, Orillia	744·50	744·86

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail at Ross street, Orillia	748·13	748·49
	Base of G.T.R. rail at road crossing, Orillia	744·04	744·40
	Base of G.T.R. rail at road crossing, Orillia	775·39	775·76
	Base of G.T.R. rail at Silver creek platform	745·38	745·75
	Base of G.T.R. rail at Silver creek, crossing	744·86	745·23
679	On W. end of N. wall of overhead crossing	733·36	733·73
	Centre of overhead crossing, 2,290 feet S. of mile 136·28	734·69	735·06
	Centre of bridge over Silver creek at mile post 136–28	720·26	720·63
680	On N.W. corner of N. abutment of bridge over Silver creek	678·76	679·14
	Centre of bridge over Silver creek	682·42	682·80
	Base of G.T.R., second crossing N. of Silver creek station	677·09	677·47
681	On rock, 7 feet N. of track, 421 feet S. of mile post 138–26	677·22	677·60
	Base of G.T.R. opposite B.M. 681	677·48	677·86
DCLXXXIX.	On rock, 7 feet N. of track, 2,105 feet N. of mile 138–26	686·96	687·35
	Base of G.T.R. rail at B.M. DCLXXXIX	687·44	687·83
	Base of G.T.R. rail at Uhthoff crossing	696·41	696·80
682	On rock, 12 feet S. of track, 1,665 feet N. of mile 139–25	695·43	695·82
	Base of G.T.R. rail at B.M. 682	697·71	698·10
	Base of G.T.R. rail at Uhthoff station	698·43	698·82
DCXC.	On rock, S. of track, 1,465 feet E. of mile 140–24	686·84	687·23
	Base of G.T.R. rail at B.M. DCXC	685·92	686·31
	Base of G.T.R. rail, first crossing N. of Uhthoff station	677·72	678·11
683	On N.W. corner of culvert, 660 feet N. of mile 141–23	643·95	644·35
	Base of G.T.R. rail at bench 683	645·01	645·41
DCXCI.	On rock, 11 feet S. of track, 1,850 feet S. of mile 142–22	659·21	659·61
	Base of G.T.R. rail, opposite B.M. DCXCI	658·18	658·58
	Base of G.T.R. rail at Foxmead station	677·80	678·20
	Base of G.T.R. rail at Foxmead station crossing	678·01	678·41
	Base of G.T.R. rail at Foxmead, second crossing	668·66	669·06
DCXCII.	On boulder, 23 feet N. of track, 1,985 feet W. of mile 142–22	659·85	660·25
	Base of G.T.R. rail at B.M. DCXCII	665·43	665·83
684	On boulder, 6 feet W. of track, 1,650 feet N. of mile 143–21	655·93	656·34
	Base of G.T.R. rail, opposite B.M. 684	655·50	655·91
	Base of G.T.R. rail at Tait station crossing	640·51	640·92
	Base of G.T.R. rail at Tait station	639·45	639·86
DCXCIII.	On rock, 9 feet N. of track, 1,925 feet E. of mile 145–19	632·93	633·35
	Base of G.T.R. rail, opposite B.M. DCXCIII	632·30	632·72
	Base of G.T.R. rail, first crossing W. of Tait station	621·08	621·50
	Base of G.T.R. rail, crossing of C.P.R., Sudbury line	619·35	619·77
	Base of G.T.R. rail, second crossing W. of Tait station	618·37	618·79
685	On boulder, 9 feet N. of track, 957 feet W. of mile 146–18	607·46	607·88
	Base of G.T.R. rail, opposite B.M. 685	608·71	609·13
	Base of G.T.R. rail, second crossing W. of Tait station	608·98	609·40
	Base of G.T.R. rail, first crossing E. of Coldwater station	589·20	589·72
	Base of G.T.R. rail, centre of bridge over Coldwater river	589·28	589·71
686	On N.E. corner of bridge over Coldwater river	586·44	586·87
	Base of G.T.R. rail at Coldwater station	588·03	588·46
	Base of G.T.R. rail, first crossing W. of Coldwater	595·61	596·04
	Base of G.T.R. rail, second crossing W. of Coldwater	596·95	597·39
	Base of G.T.R. rail, third crossing W. of Coldwater	596·51	596·95
	Base of G.T.R. rail at Fesserton crossing	588·40	588·84
	Base of G.T.R. rail at Fesserton station	588·50	588·94
687	On E. end of culvert, ½ mile west of Fesserton station	587·12	587·56
	Base of G.T.R. rail at B.M. 687	590·01	590·45
	Base of G.T.R. rail, at crossing to Carter's saw mill	587·88	588·32
688	On W. base of chimney of James Carter's saw mill	586·27	586·71
	Base of G.T.R. rail, main road crossing, Waubaushene	592·30	592·74
	Base of G.T.R. rail at Waubaushene station	592·69	593·13
DCXCIV.	On N.E. base of Waubaushene station	593·55	594·00
	Street level, intersection of main road and road to wharf	588·85	589·29
	Base of G.T.R. rail, French street crossing	594·45	594·90
	Base of G.T.R. rail, main road crossing	600·66	601·11
	Base of G.T.R. rail, Pine street crossing	592·62	593·07
DCXCV.	On W. face of boulder, 26 feet N. of track	587·45	587·90
	Base of G.T.R. rail, opposite B.M. DCXCV	589·89	590·34
	Base of G.T.R. rail at Tanner's crossing	594·25	594·71
	Base of G.T.R. rail at Tanner's station	593·82	594·28
	Base of G.T.R. rail at Sturgeons Bay station	589·91	590·37
	Base of G.T.R. rail, centre of bridge over Sturgeon river	591·79	592·26
	Base of G.T.R. rail under overhead crossing	611·56	612·04
	Base of G.T.R. rail at Helen street crossing	599·29	599·77
	Base of G.T.R. rail at John street crossing	596·19	596·68
DCXCVI.	On N.W. base of saw-dust consumer, Victoria Harbour	591·57	592·06
DCXCVII.	On N.E. corner of pumphouse, Victoria Harbour	589·24	589·73
	Base of G.T.R. rail at Victoria Harbour station	595·04	595·53
689	On E. end of W. abutment of bridge over Hog creek	590·99	591·49
DCXCVIII.	On W. end of W. abutment of bridge over Hog creek	587·13	587·63
	Centre of bridge over Hog creek	594·41	594·91
	Base of G.T.R. rail, first crossing W. of Victoria Harbour	595·20	595·70

SESSIONAL PAPER No. 19a

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location an l Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail, second crossing W. of Victoria Harbour..	597·41	597·91
	Base of G.T.R. rail, third crossing W. of Victoria Harbour...	593·10	593·61
	Base of G.T.R. rail, fourth crossing W. of Victoria Harbour..	593·68	594·19
	Base of G.T.R. rail, fifth crossing W. of Victoria Harbour....	624·26	624·78
690	On W. end of G.T.R. bridge over Mud Lake river.....	594·19	594·72
	Centre of G.T.R., bridge over Mud Lake river.....	596·71	597·24
	Base of G.T.R. rail at Old Fort station.....	598·18	598·71
	Base of G.T.R. rail at Midland station.....	593·23	593·79
DCXCIX.	On foundation of bay window, Wm. Rogers' house, Bay St..	601·19	601·75
DCC.	On Bay street, foundation of Queen's Hotel, Midland.....	597·94	598·50
	Base of G.T.R. rail, opposite B.M. DCLXXXVII.....	732·58	732·93
	Base of G.T.R., rail at crossing.....	758·50	758·83
	Base of G.T.R. rail, opposite B.M. DCCXXVII.....	758·48	758·81
DCCXXVII.	On rock, 7 feet W. of track, 95 feet S. of centre of crossing...	759·31	759·64
	Base of G.T.R. rail at crossing.....	757·62	757·95
	Base of G.T.R. rail, opposite B.M. 702.....	735·30	735·63
702	On rock, 10 feet W. of track, 372 feet N. of mile 131–96.....	734·67	735·00
	Base of G.T.R. rail, opposite B.M. DCCXXV.....	723·50	723·83
DCCXXVI.	On rock, 20 feet W. of track, 935 feet N. of mile 130–97.....	720·60	720·93
	Centre of G.T.R. bridge over E. branch of Severn river.....	727·83	728·16
DCCXXV.	On E. end of N. abutment of bridge over E. branch of Severn river.....	724·09	724·42
	Base of G.T.R. rail at crossing of James Bay Ry.....	725·23	725·56
	Centre of G.T.R. bridge over E. arm of W. branch of Severn river.....	727·65	727·97
DCCXXIV.	On E. end of N. abutment of bridge, E. arm of W. branch of Severn river.....	726·24	726·56
	Base of G.T.R. rail, at Washago station.....	727·23	727·55
	Base of G.T.R. rail, at Washago crossing.....	727·67	727·99
	Centre of G.T.R. bridge over W. branch of Severn river.....	730·84	731·16
DCCXXIII.	On W. end of N. abutment of bridge over W. branch of Severn river.....	729·15	729·47
	Base of G.T.R. rail, opposite B.M. 701.....	732·11	732·43
701	On rock, 13 ft. W. of track, 1,065 N. of mile 127–100.....	731·95	732·27
	Base of G.T.R. rail, at Severn station.....	727·78	728·10
	Base of G.T.R. rail, centre of bridge over Severn river.....	723·99	724·31
DCCXXII	On W. end of N. abutment of bridge over Severn river.....	718·55	718·87
	Base of G.T.R. rail, at crossing.....	732·60	732·92
	Base of G.T.R. rail, opposite B.M. 700.....	735·25	735·57
700	On rock, 14 ft. W. of track, 340 ft. N. of centre of crossing...	735·89	736·21
	Base of G.T.R. rail, at crossing.....	749·57	749·89
	Base of G.T.R. rail, at crossing.....	741·84	742·16
	Base of G.T.R. rail, opposite B.M. DCCXXI.....	730·76	731·08
DCCXXI.	On rock, 5 ft. of track, 2,390 ft. N. of mile 125–102.....	731·29	731·61
	Base of G.T.R. rail, at crossing.....	731·42	731·74
	Base of G.T.R. rail, at crossing.....	727·15	727·46
	Base of G.T.R. rail, opposite B.M. DCCXX.....	731·84	732·15
DCCXX.	On rock, 23 ft. W. of track, 2,190 ft. N. of mile 124–103.....	734·62	734·93
	Base of G.T.R. rail, at crossing.....	722·09	722·40
	Centre of G.T.R. bridge over Kashabogamog river.....	719·49	719·80
DCCXIX.	On W. end of N. abutment of bridge over Kashabogamog river.....	715·74	716·05
	Base of G.T.R. rail, opposite B.M. DCCXVIII.....	719·63	719·94
DCCXVIII.	On rock, 6 ft. W. of track, 1,188 ft. S. of mile 121–107.....	720·18	720·49
	Base of G.T.R. rail, opposite B.M. 699.....	730·40	730·71
699	On rock, 22 ft. E. of track, 328 ft. N. of mile 121–107.....	730·83	731·14
	Base of G.T.R. rail, at 1st crossing S. of Kilworthy station..	734·59	734·90
	Base of G.T.R. rail, at Kilworthy station.....	747·39	747·70
	Base of G.T.R. rail, at Kilworthy crossing.....	750·85	751·16
	Base of G.T.R. rail, opposite B.M. DCCXVII.....	743·01	743·31
DCCXVII.	On rock, 12 ft. E. of track, 715 ft. S. of mile 120–107.....	744·67	744·97
	Base of G.T.R. rail, at crossing.....	740·93	741·23
	Base of G.T.R. rail, opposite B.M. DCCXVI.....	755·74	756·04
DCCXVI.	On rock, 11 ft. W. of track, 465 ft. N. of mile 119–108.....	758·65	758·95
	Base of G.T.R. rail, opposite B.M. DCCXV.....	798·57	798·87
DCCXV.	On rock, 34 ft. W. of track, 1,140 ft. S. of mile 118–109.....	798·86	799·16
	Base of G.T.R. rail, opposite B.M. DCCXV.....	847·65	847·95
DCCXIV.	On rock, 37 ft. E. of track, 805 ft. S. of mile 117–110.....	848·70	849·00
	Base of G.T.R. rail, opposite B.M. DCCXIV.....	846·00	846·30
698	On rock, 7·7 ft. W. of track, 2,526 ft. N. of mile 117–110...	847·44	847·74
	Base of G.T.R. rail, opposite B.M. DCCXIII.....	837·05	837·34
DCCXIII.	On rock, 6·6 ft. E. of track, 69 ft. S. of mile 116 111.....	838·24	838·53
DCCXII.	On rock at Dyment's wharf, 225 ft. W. of Muskoka wharf....	746·03	746·32
	Base of G.T.R. rail, at Muskoka wharf station.....	743·75	744·05
	Base of G.T.R. rail, crossing, branch to Muskoka wharf..	751·07	751·36
	Base of G.T.R. rail, opposite Gravenhurst station.....	815·06	815·35
	Base of G.T.R. rail, opposite B.M. DCCXI.....	818·62	818·91
DCCXI.	On rock, 36 ft. E. of track, 360 ft. N. of Gravenhurst station .	817·96	818·25
	Base of G.T.R. rail, at crossing of Muskoka road..	828·96	829·25

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail, at crossing of James street	832·11	832·40
	Base of G.T.R. rail, at crossing of Philip and Royal streets	836·18	836·47
	Base of G.T.R. rail, at crossing of Brock street	839·03	839·32
	Base of G.T.R. rail, at crossing of Church street	834·35	834·64
	Base of G.T.R. rail, at crossing	826·90	827·19
	Base of G.T.R. rail, opposite B.M. 697	827·11	827·40
697	On rock, 21 ft. W. of track, 495 ft. S. of mile 114–113	825·34	825·63
	Base of G.T.R. rail, over creek	812·27	812·56
	Base of G.T.R. rail, over road	812·31	812·60
	Base of G.T.R. rail, opposite B.M. DCCX	812·28	812·57
DCCX.	On W. end of N. abutment of overhead crossing at road and creek	810·74	811·03
	Base of G.T.R. rail, at crossing	826·11	826·40
	Base of G.T.R. rail, opposite B.M. 696	828·37	828·66
696	On rock, 17 ft. W. of track, 1,120 ft. N. of mile 113–114	827·98	828·27
	Base of G.T.R. rail, opposite B.M. DCCIX	849·95	850·24
DCCIX.	On rock, 8½ ft. E. of track, 1,980 ft. S. of mile 112–115	850·12	850·41
	Base of G.T.R. rail, at crossing	868·89	869·17
	Base of G.T.R. rail, opposite B.M. 695	884·07	884·35
695	On rock, 28 ft. W. of track, 260 ft. S. of mile 111–116	883·56	883·84
	Base of G.T.R. rail, at crossing	897·88	898·16
	Base of G.T.R. rail, opposite B.M. 694	903·93	904·21
694	On rock, 29 ft. W. of track, 2,035 ft. S. of mile 110–117	900·85	901·13
	Base of G.T.R. rail, opposite B.M. DCCVIII	901·29	901·57
DCCVIII.	On rock, 9 ft. W. of track, 2,060 ft. S. of post 109–118	903·26	903·54
	Base of G.T.R. rail, opposite B.M. DCCVII	895·82	896·10
DCCVII.	On boulder, 46 ft. E. of track, 1,515 ft S. of mile 108–119	894·82	895·10
	Base of G.T.R. rail, at crossing	879·99	880·26
	Base of G.T.R. rail, opposite B.M. 693	860·84	861·11
693	On rock, 23 ft. E. of track, 2,450 ft. N. of mile 108–119	864·00	864·27
	Base of G.T.R. rail, opposite B.M. DCCVI	801·85	802·12
DCCVI.	On E. end of S. abutment of bridge, S. branch Muskoka river	797·02	797·29
	Base of G.T.R. rail, centre of bridge, S. branch Muskoka river	801·89	802·16
	Base of G.T.R. rail, at main road crossing	813·75	814·02
	Base of G.T.R. rail, opposite B.M. DCCV	816·54	816·81
DCCV.	On W. face of S. abutment of G.T.R. bridge over Muskoka river	811·99	812·26
	Centre of G.T.R. bridge over Muskoka river	816·63	816·90
	Base of G.T.R. rail, at B.M. DCCIV	815·64	815·91
	Base of G.T.R. rail, at Manitoba street, Bracebridge	815·93	816·20
DCCIV.	On rock, 9·6 ft. E. of track, 40 ft. N. of centre of Manitoba street	817·56	817·83
	Centre of highway bridge over Muskoka river at Thomas street	811·34	811·61
692	On S. end of W. abutment of bridge at Thomas street	807·78	808·05
	Base of G.T.R. rail, opposite Thomas street crossing	810·61	810·88
	Base of G.T.R. rail, opposite Bracebridge station	812·26	812·53
	Base of G.T.R. rail, 1st crossing N. of Bracebridge station	821·82	822·09
	Base of G.T.R. rail, opposite B.M. DCCIV	850·50	850·76
691	On rock 24 ft. W. of track, 414 ft. N. of mile post 104–123	851·14	851·40
	Base of G.T.R. rail, at B.M. DCCIII	885·73	885·99
DCCIII.	On E. face of culvert, 1,180 ft. S. of mile 103–124	870·09	870·35
	Base of G.T.R. rail, 4th crossing S. of Falkenburg station	919·03	919·29
	Base of G.T.R. rail, 3rd crossing S. of Falkenburg station	923·61	923·87
	Base of G.T.R. rail, 2nd crossing S. of Falkenburg station	934·37	934·63
	Base of G.T.R. rail, opposite B.M. DCCII	941·83	942·09
DCCII.	On rock, 10 ft. E. of track, 900 ft. N. of mile 101–126	941·67	941·93
	Base of G.T.R. rail, Falkenburg station crossing	952·02	952·32
	Base of G.T.R. rail, Falkenburg station	952·25	952·51
	Base of G.T.R. rail, opposite B.M. DCCI	954·09	954·35
DCCI.	On flat rock, 21 ft. W. of track, 213 ft. S. of mile 100–127	951·89	952·15
	Base of G.T.R. rail, opposite B.M. DCCI	954·08	954·35
DCCXXVIII.	On rock, 11 ft. E. of track, 2,390 ft. N. of mile 127–100	955·24	955·49
	Base of G.T.R. rail, opposite B.M. DCCXXVIII	954·79	955·04
	Base of G.T.R. rail, at crossing	970·35	970·60
DCCXXIX.	On W. face of culvert, 2,407 ft. N. of mile 128–99	983·59	983·84
	Base of G.T.R. rail, opposite B.M. DCCXXIX	988·18	988·43
	Base of G.T.R. rail, at crossing	1,008·13	1,008·38
DCCXXX.	On rock, 9 ft. W. of track, 61·9 ft. S. of mile 130–97	1,044·71	1,044·96
	Base of G.T.R. rail, opposite B.M. DCCXXX	1,043·23	1,043·48
	Base of G.T.R. rail, at crossing	1,009·30	1,009·55
	Base of G.T.R. rail, at crossing	1,021·94	1,022·18
DCCXXXI.	On rock, E. side of track, 1,700 ft. N. of mile post 131–96	1,024·70	1,024·94
	Base of G.T.R. rail, opposite B.M. DCCXXI	1,024·11	1,024·35
DCCXXXII.	On rock, 9 ft. W. of track, 1,230 ft. N. of mile 132–95	1,095·96	1,006.20
	Base of G.T.R. rail, opposite B.M. DCCXXXII	1,005·70	1,005·94
703	On W. face of culvert, 2,565 ft. S. of mile 133–94	986·64	986·88

SESSIONAL PAPER No. 19a

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail, opposite B.M. 703	993·01	993·25
	Base of G.T.R. rail, at crossing	1,013·19	1,013·43
	Base of G.T.R. rail, at crossing	1,038·88	1,039·12
	Base of G.T.R. rail, at crossing	1,022·46	1,022·70
DCCXXXIII.	On rock, 35 ft. W. of track, 357 ft. S. of mile 135–92	1,027·95	1,028·19
	Base of G.T.R. rail, opposite B.M. DCCXXXIII	1,030·62	1,030·86
	Base of G.T.R. rail, at Utterson station	1,035·67	1,035·90
	Base of G.T.R. rail, at Utterson station crossing	1,036·06	1,036·29
DCCXXXIV.	On rock, 8·7 ft. E. of track, 140 ft. N. of Utterson crossing	1,037·57	1,037·80
	Base of G.T.R. rail, opposite B.M. DCCXXIV	1,035·73	1,035·96
DCCXXXV.	On rock, 9 ft. E. of track, 2,070 ft. N. of mile post 136–91	1,048·70	1,048·93
	Base of G.T.R. rail, opposite B.M. DCCXXXV	1,045·49	1,045·72
DCCXXXVI.	On rock, 7 ft. W. of track, 1,590 ft. N. of mile 137–90	1,002·31	1,002·54
	Base of G.T.R. rail, opposite B.M. DCCXXXVI	1,001·31	1,001·54
	Base of G.T.R. rail, at crossing	995·79	996·02
704	On boulder, 17 ft. W. of track, 134 ft. S. of mile 138–89	977·54	977·77
	Base of G.T.R. rail, opposite B.M. 704	976·84	977·07
	Base of G.T.R. rail, at crossing	974·18	974·41
	Base of G.T.R. rail, at crossing	969·39	969·62
	Base of G.T.R. rail, centre of bridge over creek	964·72	964·95
	Base of G.T.R. rail, at crossing	964·67	964·90
705	Under E. rail, N. end of bridge over creek	964·05	964·27
	Centre of G.T.R., wooden bridge over creek	967·00	967·22
DCCXXXVII.	On S. end of W. face of culvert, 780 ft. S. of mile 140–87	967·08	967·30
	Base of G.T.R. rail, opposite B.M. DCCXXXVII	974·78	975·00
	Base of G.T.R. rail, at crossing	986·44	986·66
	Base of G.T.R. rail, at crossing	1,017·21	1,017·43
DCCXXXVIII.	On rock, 40 ft. E. of track, 173 ft. S. of mile 142–85	1,025·04	1,025·26
	Base of G.T.R. rail, opposite B.M. DCCXXXVIII	1,028·55	1,028·77
	On base of G.T.R. rail, at crossing	1,002·53	1,002·75
706	On boulder, 48 ft. E. of track, 1,360 ft. N. of mile 143–84	976·74	976·95
	Base of G.T.R. rail, opposite B.M. 706	979·36	979·57
	Base of G.T.R. rail, at crossing	975·05	975·26
707	On boulder, 9 ft. E. of track, 575 ft. S. of mile 144–83	979·40	979·61
	Base of G.T.R. rail, opposite B.M. 707	979·11	979·32
	Base of G.T.R. rail, at crossing	945·86	946·07
	Base of G.T.R. rail, at main road crossing	946·08	946·29
DCCXXXIX.	On rock, 17 ft. E. of track, 1,725 ft. S. of mile 146–81	951·82	952·03
	Base of G.T.R. rail, opposite B.M. DCCXXXIX	950·47	950·68
	Base of G.T.R. rail, at crossing, Huntsville	954·06	954·27
	Base of G.T.R. rail at station, Huntsville	951·23	951·44
DCCXL.	On W. face of S. abutment of bridge over Vernon river	964·71	964·92
	Centre of G.T.R. bridge over Vernon river	965·57	965·78
	Base of G.T.R. rail, under centre of overhead crossing	969·37	969·58
	Base of G.T.R. rail at crossing	981·89	982·09
DCCXLI.	On rock, 10 feet W. of track at mile 148–79	996·10	996·30
	Base of G.T.R. rail, opposite B.M. DCCLI	994·75	994·95
	Base of G.T.R. rail at crossing	949·18	949·38
	Base of G.T.R. rail at crossing	947·16	947·36
DCCXLII.	On E. end of S. abutment of bridge over Big East river	954·10	954·30
	Centre of G.T.R. bridge over Big East river	957·08	957·28
DCCXLIII.	On W. end of S. wall of culvert, marked (206)	990·92	991·11
	Base of G.T.R. rail, opposite B.M. DCCXLIII	996·81	997·00
	Base of G.T.R. rail at crossing	997·52	997·71
	Base of G.T.R. rail at crossing	1,045·24	1,045·43
DCCXLIV.	On E. face of S. abutment of trestle over Little East river	1,041·35	1,041·54
	Centre of trestle over Little East river	1,044·39	1,044·58
	Base of G.T.R. rail at crossing	1,052·00	1,052·18
708	On centre of N. wall of cattle guard, N. side of crossing	1,051·62	1,051·81
	Base of G.T.R. rail at B.M. 708	1,052·00	1,052·19
	Base of G.T.R. rail at Novar crossing	1,070·72	1,070·90
	Base of G.T.R. rail at Novar station	1,070·37	1,070·55
709	On W. end of N. wall of culvert, 195 feet S. of mile 156–71	1,065·86	1,066·05
	Base of G.T.R. rail, opposite B.M. 709	1,069·51	1,069·69
710	On E. end of N. wall of culvert, 1,335 feet S. of mile 157–70	1,069·35	1,069·53
	Base of G.T.R. rail, opposite B.M. 710	1,072·40	1,072·58
711	On E. end of S. wall of culvert, 433 feet N. of mile 158–69	1,073·90	1,074·08
	Base of G.T.R. rail, opposite B.M. 711	1,076·74	1,076·92
DCCXLV.	On rock, 9 feet E. of track, 2,065 feet N. of mile 159–68	1,119·54	1,119·71
	Base of G.T.R. rail, opposite B.M. DCCXLV	1,119·56	1,119·73
	Base of G.T.R. rail under centre of overhead crossing	1,122·84	1,123·01
DCCXLVI.	On rock, 10 feet E. of track, 117 feet N. of overhead crossing	1,122·38	1,122·55
	Base of G.T.R. rail, opposite B.M. DCCXLVI	1,120·84	1,121·01
DCCXLVII.	On rock, 14 feet E. of track, 160 feet N. of black-white semaphore, Scotia Junction	1,087·40	1,087·57
	Base of G.T.R. rail, opposite B.M. DCCXLVII	1,084·05	1,084·22
	Base of G.T.R. rail, Scotia junction	1,081·76	1,081·93
	Base of G.T.R. rail at crossing	1,082·83	1,083·00
	Base of G.T.R. rail opposite B.M. DCCLXXI	1,082·42	1,082·59

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
DCCLXXI.	On rock, 7 feet E. of track, 155 feet N. of semaphore	1,082·82	1,082·99
	Base of G.T.R. rail, centre of bridge over Ragged creek	1,069·71	1,069·88
	Base of G.T.R. rail at Elmsdale crossing	1,039·24	1,039·41
DCCLXX.	On rock, 70 feet W. of track, 23 feet S. of Elmsdale station	1,039·88	1,040·05
	Base of G.T.R. rail, at Elmsdale station	1,038·47	1,038·64
DCCLXIX.	On W. end of S. wall of culvert, 1,305 feet N. of mile 63–164	1,025·42	1,025·58
	Centre of G.T.R. culvert over brook	1,031·53	1,031·69
	Base of G.T.R. rail at crossing	1,034·48	1,034·64
	Base of G.T.R. rail opposite B.M. DCCLXVIII	1,024·40	1,024·56
DCCLXVIII.	On rock, S feet W. of track, 1,150 feet S. of mile 62–165	1,023·62	1,023·78
	Centre of G.T.R. bridge over S. branch of Magnetawan river	983·73	983·89
DCCLXVII.	On E. face of N. abutment of bridge over Magnetawan river	981·23	981·39
	Base of G.T.R. rail at Katrine station crossing	983·53	983·69
	Base of G.T.R. rail at Katrine station	983·45	983·61
	Base of G.T.R. rail opposite B.M. DCCLXVI	982·79	982·94
DCCLXVI.	On rock, 9 feet E. of track, 490 feet S. of mile 59–168	983·85	984·00
	Centre of G.T.R. bridge over S. branch of Magnetawan river	976·97	977·12
DCCLXV.	On W. face of N. abutment of bridge over Magnetawan river	975·68	975·83
	Base of G.T.R. rail at crossing	983·89	984·04
	Centre of G.T.R. bridge over S. branch of Magnetawan river	969·96	970·11
DCCLXIII.	On E. face of N. abutment of bridge over S. branch of Magnetawan river	966·63	966·78
	Base of G.T.R. rail at crossing	975·41	975·55
	Base of G.T.R. rail at Burk's Falls station	970·57	970·71
	Base of G.T.R. rail at Magnetawan wharf station	939·66	939·80
	Level of S.E. corner of Magnetawan river wharf	932·06	932·20
718	On rock, 34 feet S. of track, 39 feet off Magnetawan river wharf	933·52	933·66
	Centre of G.T.R. bridge over Burk's Falls	953·97	954·11
	Base of G.T.R. rail, opposite B.M. DCCLXIV	956·01	956·15
DCCLXIV.	On rock, 7½ feet W. of track, to sawmills, Burk's Falls	958·80	958·94
	Crest of dam, head of Burk's Falls	956·33	956·47
	Centre of highway bridge, foot of main street, Burk's Falls	962·97	963·11
	Base of G.T.R. rail, foot of main street, Burk's Falls	964·00	964·14
	Centre of G.T.R. bridge, over S. branch of Magnetawan river	969·89	970·03
	Centre of G.T.R. bridge, over N. branch of Magnetawan river	982·97	983·10
DCCLXII.	On W. face of N. abutment of bridge, over N. branch of Magnetawan river	978·57	978·71
	Base of G.T.R. rail at crossing	1,009·97	1,010·11
	Base of G.T.R. rail, opposite B.M. DCCLXI	1,021·29	1,021·43
DCCLXI.	On rock, 9 feet W. of track, 237 feet N. of mile 54–173	1,023·82	1,025·96
	Base of G.T.R. rail, opposite B.M. DCCLX	1,064·37	1,064·51
DCCLX.	On rock, 10 feet W. of track, 360 feet S. of mile 53–174	1,064·31	1,064·45
	Base of G.T.R. rail, opposite B.M. DCCLIX	1,056·47	1,056·61
DCLIX.	On S. end of E. face of culvert, 2,326 feet N. of mile 53–174	1,041·89	1,042·03
	Base of G.T.R. rail at Berrydale crossing	1,058·26	1,058·40
	Base of G.T.R. rail opposite B.M. DCCLVIII	1,133·10	1,133·23
DCCLVIII.	On rock, 11½ feet W. of track, 58½ feet S. of mile 51–176	1,132·84	1,132·97
	Base of G.T.R. rail at crossing	1,135·27	1,135·40
	Base of G.T.R. rail opposite B.M DCCLVII	1,108·38	1,108·51
DCCLVII.	On boulder, 29 feet W. of track, 288 feet N. of mile 50–177	1,102·10	1,102·23
	Base of G.T.R. rail at crossing	1,091·32	1,091·45
	Base of G.T.R. rail opposite B.M. 717	1,089·72	1,089·85
717	On boulder, 25 feet W. of track, 105 feet S. of mile 49–178	1,090·36	1,090·49
	Base of G.T.R. rail opposite B.M. DCCLVI	1,103·11	1,103·24
DCCLVI.	On rock, 7½ feet W. of track, 1,106 feet S. of mile 48–179	1,102·19	1,102·32
	Centre of G.T.R. wooden bridge over Stony creek	1,090·05	1,090·18
716	On E. side of S. end of wooden bridge over Stony creek	1,087·20	1,087·33
	Base of G.T.R. rail, opposite B.M. 715	1,110·53	1,110·65
715	On rock, 6 feet E. of track, 188 feet N. of mile 47–180	1,109·66	1,109·78
	Base of G.T.R. rail at crossing	1,100·40	1,100·52
	Base of G.T.R. rail opposite B.M. DCCLV	1,096·05	1,096·17
DCCLV.	On rock, 18 feet W. of track, 435 feet N. of mile 46–181	1,094·57	1,094·69
	Base of G.T.R. rail opposite B.M. 714	1,095·54	1,095·66
714	On W. end of N. wall of culvert, 345 feet N. of mile 45–182	1,090·47	1,090·59
	Base of G.T.R. rail at road crossing	1,094·25	1,094·37
	Base of G.T.R. rail at crossing of street	1,098·88	1,099·00
	Base of G.T.R. rail opposite B.M. 713	1,099·13	1,099·25
713	On W. end of N. wall of cattle guard, 250 feet S. of mile 44–183	1,095·52	1,095·64
	Base of G.T.R. rail at crossing of street	1,098·93	1,099·05
	Base of G.T.R. rail at Sun bridge station crossing	1,099·66	1,099·77
	Base of G.T.R. rail at Sun bridge station	1,099·88	1,099·99
	Base of G.T.R. rail at crossing	1,109·61	1,109·72
	Base of G.T.R. rail opposite B.M. DCCLIV	1,118·98	1,119·09
DCCLIV.	On S. end of W. face of culvert, 356 feet S. of mile 43–184	1,114·04	1,114·15
	Base of G.T.R. rail at crossing	1,119·43	1,119·54
	Base of G.T.R. rail at crossing	1,128·12	1,128·23
	Base of G.T.R. rail opposite B.M. DCCLIII	1,146·89	1,147·00
DCCLIII.	On rock, 11 feet W. of track, 215 feet S. of mile 42–185	1,147·94	1,148·05
	Base of G.T.R. rail opposite B.M. DCCLII	1,160·18	1,160·29

SESSIONAL PAPER No. 19a

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
DCCLII.	On boulder, 41 feet W. of track, 2,380 feet S. of mile 41–186.	1,158·86	1,158·97
	Base of G.T.R. rail at crossing	1,186·31	1,186·42
	Base of G.T.R. rail at crossing	1,173·18	1,173·29
	Base of G.T.R. rail at crossing	1,155·20	1,155·30
	Base of G.T.R. rail opposite B.M. 712	1,158·19	1,158·29
712	On boulder, 14 feet E. of track, 400 feet S. of semaphore	1,157·07	1,157·17
	Base of G.T.R. rail at South River station	1,157·87	1,157·97
	Base of G.T.R. rail at South River station crossing	1,157·78	1,157·88
	Base of G.T.R. rail opposite B.M. DCCLI	1,156·33	1,156·43
DCCLI.	On rock, 8 feet W. of track, 189 feet N. of semaphore	1,156·75	1,156·85
	Centre of G.T.R. bridge over South river	1,156·88	1,156·98
DCCL.	On E. end of N. abutment of bridge over South river	1,152·95	1,153·05
	Base of G.T.R. rail opposite B.M. DCCXLIX	1,152·57	1,152·67
DCCXLIX.	On rock, 11 feet W. of track, 518 feet N. of mile 37–190	1,152·75	1,152·85
	Base of G.T.R. rail opposite B.M. DCCXLVIII	1,184·07	1,184·17
DCCXLVIII.	On rock, 11 feet E. of track, 51 feet S. of mile 36·191	1,185·11	1,185·21
	Base of G.T.R. rail opposite B.M. DCCXLVIII	1,184·08	1,184·17
	Base of G.T.R. rail at crossing	1,195·16	1,195·26
DCCLXXII.	On rock, 9 feet E. of track, 158 feet S. of mile 35–192	1,194·77	1,194·86
	Base of G.T.R. rail opposite B.M. DCCLXXII	1,195·27	1,195·36
719	On boulder, 16 feet W. of track, 62 feet N. of mile 34–193	1,194·83	1,194·92
	Base of track, opposite B.M. 719	1,194·10	1,194·19
DCCLXXIII.	On rock, 16 feet W. of track, 2,080 feet S. of mile 33–194	1,192·34	1,192·43
	Base of G.T.R. rail opposite B.M. DCCLXXIII	1,193·84	1,193·93
	Base of G.T.R. rail at gravel pit crossing	1,190·05	1,190·14
	Base of G.T.R. rail, centre of high trestle over gully	1,175·69	1,175·78
DCCLXXIV.	On rock, 10 feet W. of track, at mile post 33–194	1,176·97	1,177·06
	Base of G.T.R. rail opposite B.M. DCCLXXIV	1,174·65	1,174·74
DCCLXXV.	On rock, 10 feet E. of track, 174 feet S. of mile post 32–195	1,150·32	1,150·41
	Base of G.T.R. rail opposite B.M. DCCLXXV	1,148·17	1,148·26
DCCLXXVI.	On boulder, 12 feet W. of track, 305 feet S. of mile 31–196	1,105·61	1,105·69
	Base of G.T.R. rail opposite B.M. DCCLXXVI	1,104·24	1,104·32
720	On boulder, 16 feet E. of track at mile post 30–197	1,053·76	1,053·84
	Base of G.T.R. rail opposite B.M. 720	1,054·88	1,054·96
721	On W. end of N. abutment of bridge, 480 feet S. of mile 29–198	1,030·93	1,031·01
	Base of G.T.R. rail, centre of bridge, 480 feet S. of mile 29–198	1,033·19	1,033·27
722	On boulder, 14½ feet W. of track, 106 feet S. of mile 28–197	1,025·87	1,025·95
	Base of G.T.R. rail opposite B.M. 722	1,029·23	1,029·31
	Base of G.T.R. rail, centre of bridge over South river	1,026·05	1,026·12
723	On S. base support of G.T.R. tank, Trout creek	1,027·30	1,027·37
	Base of G.T.R. rail opposite B.M. 723	1,026·35	1,026·42
	Base of G.T.R. rail at Trout creek station	1,026·80	1,026·87
	Base of G.T.R. rail at Trout creek station crossing	1,027·38	1,027·45
DCCLXXVII.	On boulder, 13 feet W. of track, 240 feet N. of mile 25–202	1,039·36	1,039·43
	Base of G.T.R. rail opposite B.M. DCCLXXVII	1,039·24	1,039·31
DCCLXXVIII.	On rock, 7½ feet E. of track, 475 feet N. of mile post 24–203	1,024·39	1,024·45
	Base of G.T.R. rail opposite B.M. DCCLXXVIII	1,024·72	1,024·78
	Base of G.T.R. rail at crossing	977·71	977·77
DCCLXXIX.	On rock, 8 feet E. of track, 884 feet N. of mile 23–204	974·62	974·68
	Base of G.T.R. rail opposite B.M. DCCLXXIX	974·13	974·19
DCCLXXX.	On rock, 5½ feet E. of track, 615 feet S. of mile 22–205	934·57	934·63
	Base of G.T.R. rail opposite B.M. DCCLXXX	934·72	934·78
724	On boulder, 7½ feet E. of track, at mile 22–205	928·21	928·27
	Base of G.T.R. rail opposite B.M. 724	928·60	928·66
	Base of G.T.R. rail at crossing	908·71	908·77
	Base of G.T.R. rail, centre of bridge over brook	881·34	881·40
	Base of G.T.R. rail at crossing	885·66	885·72
	Base of G.T.R. rail at Powassan station	855·41	855·47
	Base of G.T.R. rail, overhead crossing of street	856·07	856·12
	Base of G.T.R. rail, overhead crossing of McGuiness' brook	856·10	856·15
DCCLXXXI.	On E. face of N. abutment of bridge over McGuiness' brook	852·21	852·26
	Base of G.T.R. rail at crossing	858·88	858·93
725	On boulder, 25 feet E. of track, 1,110 feet S. of mile 18–209	872·38	872·43
	Base of G.T.R. rail opposite B.M. 725	873·41	873·46
	Centre of G.T.R. trestle over brook	867·32	867·37
	Base of G.T.R. rail at crossing	870·36	870·41
726	On boulder, 7½ feet W. of track, 489 feet S. of mile 17–210	864·49	864·54
	Base of G.T.R. rail opposite B.M. 726	865·46	865·51
DCCLXXXII.	On boulder, 30 feet E. of track, 58 feet S. of mile post 16–211	868·11	868·16
	Base of G.T.R. rail opposite B.M. DCCLXXXII	869·57	869·62
727	On boulder, 8½ feet W. of track, 340 feet S. of mile 15–217	875·91	875·95
	Base of G.T.R. rail opposite B.M. 727	877·57	877·61
	Centre of G.T.R. trestle over brook	879·46	879·50
DCCLXXXIII.	On rock, 10 feet W. of track, 2,515 feet S. of mile 14–213	888·83	888·87
	Base of G.T.R. rail opposite B.M. DCCLXXXIII	887·91	887·95
DCCLXXXIV.	On rock, 34 feet W. of main track, 68 feet S. of mile 14–213	883·24	883·28
	Base of G.T.R. rail opposite B.M. DCCLXXXIV	884·91	884·95
DCCLXXXV.	On rock, 8 feet E. of track, 365 feet S. of mile 13–214	873·79	873·83
	Base of G.T.R. rail opposite B.M. DCCLXXXV	872·47	872·51

TORONTO to North Bay, &c.—Complete List of Bench Marks, &c.—*Concluded.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
DCCLXXXVI.	On rock, 7 feet W. of track, 610 feet S. of mile 12–215	829·33	829·37
	Base of G.T.R. rail opposite B.M. DCCLXXXVI	828·12	828·16
	Centre of G.T.R. trestle over brook	804·31	804·34
DCCLXXXVII.	On rock, 13 feet E. of track. 39 feet S. of mile 11–216	768·12	768·15
	Base of G.T.R. rail, opposite B.M. DCCLXXXVII	769·89	769·92
	Base of G.T.R. rail, centre of trestle over brook	756·26	756·29
DCCLXXXVIII.	On E. face of S. abutment of bridge over Wistawasing river	739·51	739·54
	Center of G.T.R. bridge over Wistawasing river	743·53	743·56
	Base of G.T.R. rail, at crossing of Nipissing Nasbonsing Railway	742·63	742·66
DCCLXXXIX.	On rock, 9 ft. E. of track, 1,560 ft. S. of mile 9–218	757·83	757·86
	Base of G.T.R. rail, opposite B.M. DCCLXXXIX	757·42	757·45
	Centre of G.T.R. trestle over brook	727·57	727·60
	Base of G.T.R. rail at crossing	725·55	725·58
DCCXC.	On rock, 8½ ft. W. of track, 2,000 ft. S. of mile 8–219	712·83	712·86
	Base of G.T.R. rail, opposite B.M. DCCXC	710·70	710·73
DCCXCI.	On rock, 9 ft. W. of track, 129 ft. N. of S. semaphore	675·88	675·90
	Base of G.T.R. rail, opposite B.M. DCCXCI	675·59	675·61
	Base of G.T.R. rail, overhead crossing of road	671·75	671·77
	Base of G.T.R. rail, overhead crossing of brook	671·56	671·58
	Base of G.T.R. rail, at Callender crossing	670·59	670·61
	Base of G.T.R. rail, at Callender station	670·21	670·23
DCCXCII.	On rock, 8½ ft. W. of track, 19 ft. S. of mile post 7–220	672·41	672·43
	Base of G.T.R. rail, opposite B.M. DCCXCII	672·93	672·95
	Base of G.T.R. rail, at crossing	684·62	684·64
728	On rock, 17½ ft. W. of track, 650 ft. N. of mile 6–221	705·59	705·61
	Base of G.T.R. rail, opposite B.M. 728	705·92	705·94
DCCXCIII	On rock, 9½ ft. W. of track, 1,060 ft. S. of mile 5–222	679·26	679·28
	Base of G.T.R. rail, opposite B.M. DCCXCIII	678·37	678·39
	Base of G.T.R. rail, centre of trestle over brook	671.47	671·49
	Base of G.T.R. rail, at crossing	674·76	674·78
DCCXCIV.	On E. face of S. abutment of bridge over Riviere à la Vase	673·16	673·17
	Centre of bridge (G.T.R.) over Rivier à la Vase	674·94	674·95
	Base of G.T.R. rail, at Nipissing station crossing	675·40	675·41
	Base of G.T.R. rail, at Nipissing station	675·38	675·39
	Base of G.T.R. rail, at junction with C.P.R. Nipissing	676·24	676·25
DCCXCV.	On rock, 10 ft. W. of track, at junction of G.T.R. with C.P.R.	677·50	677·51
	Base of G.T.R. rail, opposite B.M. DCCXCV	676·62	676·63
	C.P.R. bench, W. of track marked (653·77)	678·60	678·61
	Base of C.P.R. rail, at crossing	673·63	673·64
	Base of C.P.R. rail, junction to Callender	673·30	673·31
DXLVI.	On rock, 13 ft. N. of track, 717 ft. W. of mile 114 from Chalk River	667·43	667·44
	Base of G.T.R. rail, opposite B.M. DXLVI	665·31	665·32
	C.P.R. bench, marked (642·69)	667·65	667·62
611	On rock, 14 ft. S. of track, 95 ft. E. of mile 115	654·92	654·93
	Base of G.T.R. rail, opposite B.M. 611	654·50	654·51
	C.P.R. bench, marked (630·87)	655·75	655·74
DXLV.	On rock, 9 ft. N. of track, 280 ft. E. of mile 116	652·99	652·99
	Base of G.T.R. rail, opposite B.M., DXLC	650·81	650·81
	C.P.R. bench, marked (625·65)	650·55	650·55
	Centre of C.P.R. culvert, 116·19 miles from Chalk River	651·86	651·86
	Base of C.P.R. rail, at crossing	652·36	652·36
	Base of C.P.R. rail, junction of T.N.O. Ry	653·55	653·55
I.	Inside edge coping, 4th altar step, W. end of S. abutment of bridge	646·06	646·06
DXLIV.	On W. end of S. abutment of bridge over Chippewa creek	650·71	650·71
	Centre of C.P.R. bridge over Chippewa creek	654·03	654·03
	Base of C.P.R. rail, at crossing	653·94	653·94
DCCXCVI.	On base, E. face of C.P.R. North Bay	663·19	663·19
	Base of C.P.R. rail, opposite North Bay station	661·78	661·78

ROUSES' POINT TO MONTREAL, VIA LACOLLE JUNCTION, HOWICK JUNCTION, VALLEYFIELD, COTEAU JUNCTION AND LACHINE.

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
⊕ M—B	20·6 ft. from N.E. corner of Chapman building, Rouses' Point, N.Y.	107·96	107·96
	Base of D. & H. Railway at Chapman street crossing, Rouses' Point N.Y.	129·25	129·25
	Base of D. & H. Railway at Pratt street crossing, Rouses' Point, N.Y.	123·15	123·15
	Base of D. & H. Railway at Rouses' Point station	122·48	122·48
DCI.	+On N.E. corner of Rouses' Point station	123·76	123·76
	Base of D. & H. Railway at crossing of Rutland Railway	120·31	120·31
639	On boulder at boundary line, U.S. and Canada	113·40	113·41
	Base of rail at boundary line, U.S. and Canada	116·37	116·39
	Top of bronze cap Bench Well A in boundary, near River	93·60	93·63
	Cavity in bronze cap Bench Well A in boundary, near River	93·56	93·59
	Top of inside tube, Bench Well A in boundary, near River	101·57	101·59
	Top of outside tube, Bench Well A in boundary, near River	102·70	102·72
DCII.	On W. face of S. wall of G.T.R. culvert, 730 ft. S. of mile 46½	109·29	109·31
	Base of rail, centre of G.T.R. culvert, 730 ft. S. of mile 46½	113·57	113·59
	Base of rail, crossing 580 ft. S. of mile 45½	117·33	117·35
737	+On E. end of S. wall culvert, 210 ft. N. of semaphore	122·26	122·29
	Base of G.T.R. rail, opposite B.M. 737	126·71	126·74
	Base of G.T.R. rail, at Lacolle station	130·42	130·45
	Base of G.T.R. rail, at crossing	130·77	130·80
	Base of G.T.R. rail, at crossing of Napierville Railway	141·50	141·54
738	+On S. base stone of G.T.R. tank, Lacolle village	152·11	152·15
	Base of rail, opposite Lacolle village station	153·86	153·90
	Base of G.T.R. rail, Lacolle village station crossing	154·82	154·86
DCCCXIX.	On S.E. corner of A. Wilson's house back of G.T.R. station	156·72	156·76
	Base of G.T.R. rail, at road crossing	166·17	166·22
DCCCXX.	On E. end of N. face of culvert, N. side of G.T.R.	161·84	161·89
	Base of G.T.R. rail, opposite B.M. DCCCXX	166·26	166·31
DCCCXXI.	On N. end of W. abutment of G.T.R. bridge, Lacolle river	163·80	163·85
	Base of G.T.R. rail, centre of G.T.R. bridge, Lacolle river	166·95	167·00
	Base of G.T.R. rail, crossing	178·29	178·34
DCCCXXII.	On S. gable of priest's house, Ste. Claude de Lacolle	193·00	193·05
DCCCXXIII.	On N. side of Ste. Claude R.C. Church	192·81	192·86
DCCCXXIV.	On E. end of S. face of culvert, 125 ft. E. of mile 14	182·59	182·65
	Base of G.T.R. rail, opposite B.M. DCCCXXIV	185·14	185·20
	Base of G.T.R. rail, opposite Henrysburgh station	204·36	204·42
	Base of G.T.R. rail, opposite Henrysburgh station crossing	204·71	204·77
DCCCXXV.	On E. end of S. face of culvert, 2,262 ft. W. of mile 15	187·75	187·82
	Base of G.T.R. rail, opposite B.M. DCCCXXV	191·16	191·23
739	+On N. end of culvert, 340 ft. E. of mile 16	193·94	194·01
	Base of G.T.R. rail, opposite B.M. 739	195·19	195·26
DCCCXXVI.	On E. end of S. face of culvert, 1,620 ft. W. of mile 16	192·20	192·27
	Base of G.T.R. rail, opposite B.M. DCCCXXVI	196·99	197·06
	Base of G.T.R. rail, at road crossing	203·31	203·38
	Base of G.T.R. rail, at road crossing	217·98	218·05
DCCCXXVII.	On W. end of N. face of culvert, 480 ft. W. of mile 17	223·53	223·61
	Base of G.T.R. rail, opposite B.M. DCCCXXVII	226·51	226·59
DCCCXXVIII.	On S. end face, W. wall of culvert, 1,370 ft. W. of mile 18	207·50	207·58
	Base of G.T.R. rail, opposite B.M. DCCCXXVIII	210·65	210·73
	Base of G.T.R. rail, crossing 1,380 ft. W. of mile 18	210·58	210·66
DCCCXXIX.	On E. end of S. face of culvert, 1,620 ft. W. of mile 19	181·60	181·69
	Base of G.T.R. rail, opposite B.M. DCCCXXIX	184·10	184·19
	Base of G.T.R. rail, centre of bridge over Chambly river	182·84	182·93
DCCCXXX.	On boulder 29.7 ft. N. of track, 2,228 ft. W. of mile 20	182·42	182·52
	Base of G.T.R. rail, opposite B.M. DCCCXXX	184·52	184·62
	Base of G.T.R. rail, crossing	185·83	185·93
	Base of G.T.R. rail, opposite Johnson station	192·04	192·14
	Base of G.T.R. rail, opposite Johnson station crossing	193·04	193·14
	Base of G.T.R. rail, at Hemmingford junction	189·20	189·30
DCCCXXXI.	On W. end of small culvert, 2,120 ft. E. of mile 22	183·22	183·32
	Base of G.T.R. rail, opposite B.M. DCCCXXXI	185·50	185·60
DCCCXXXII.	On S. end of culvert, 162 ft. W. of mile 22	179·84	179·95
	Base of G.T.R. rail, opposite B.M. DCCCXXXII	182·04	182·15
	Base of G.T.R. rail, crossing	189·08	189·19
	Base of G.T.R. rail, centre of bridge over Norton brook	178·87	178·98
740	+On boulder, 22 ft. N. of track, 600 ft. E. of mile 23	177·67	177·78
	Base of G.T.R. rail, opposite B.M. 740	179·43	179·54
	Base of G.T.R. rail, centre of bridge over Cranberry brook	178·77	178·89
741	On boulder, 26 ft. S. of track and 1,745 ft. W. of mile 24	177·07	177·19
	Base of G.T.R. rail, opposite B.M. 741	179·07	179·19
DCCCXXXIII.	On rock 8.15 ft. S. of track, 1,634 ft. E. of mile 25	184·43	184·55

ROUSES' POINT to Montreal, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail, opposite B.M. DCCCXXXIII	184·78	184·90
	Base of G.T.R. rail, opposite Holton station	195·85	195·98
	Base of G.T.R. rail, opposite Holton station crossing	196·13	196·26
DCCCXXXIV.	On rock 9 ft. S. of track and 81 ft. W. of mile 26	195·08	195·21
	Base of G.T.R. rail, opposite B.M. DCCCXXXIV	196·13	196·26
DCCCXXXV.	On rock 8·65 ft. of track and 1,530 ft. W. of mile 27	204·11	204·25
	Base of G.T.R. rail, opposite B.M. DCCCXXXV	203·93	204·07
DCCCXXXVI.	On rock 7·05 ft. S. of track, and 2,330 ft. W. of mile 28	182·26	182·40
	Base of G.T.R. rail, opposite B.M. DCCCXXXVI	182·55	182·69
	Base of G.T.R. rail, at crossing	183·56	183·70
	Base of G.T.R. rail at crossing	179·31	179·46
DCCCXXXVII.	On E. end of N. face of culvert, 590 ft. W. of mile 30	151·15	151·30
	Base of G.T.R. rail, opposite B.M. DCCCXXXVII	155·12	155·27
	Base of G.T.R. rail, at crossing	142·08	142·24
DCCCXXXVIII.	On S. face of E. abutment of bridge over Norton brook	138·00	138·16
	Base of G.T.R. rail, opposite centre of bridge over Norton brook	141·45	141·61
	Base of G.T.R. rail, opposite Aubrey station	141·66	141·82
	Base of G.T.R. rail, opposite Aubrey station crossing	141·68	141·84
742	+On coping, N. end of culvert, 2,080 ft. E. of mile 33	136·46	136·63
	Base of rail, opposite B.M. 742	141·87	142·04
	Base of rail at crossing	141·77	141·94
DCCCXVIII.	On W. end of S. face of culvert, 2,570 ft. W. of mile 34	137·63	137·80
	Base of G.T.R. rail, opposite B.M. DCCCXVIII	140·80	140·97
	Base of G.T.R. rail, opposite B.M. DCCCXVII	142·98	143·16
DCCCXVII.	On rock 7·5 ft. N. of track and 560 ft. E. of mile 34	142·70	142·88
	Base of G.T.R. rail, crossing	141·50	141·69
	Base of G.T.R., rail crossing	131·49	131·68
	Base of G.T.R. rail, opposite B.M. DCCCXVI	130·89	131·08
DCCCXVI.	On S. face, W. abutment, bridge over English river	125·55	125·74
736	On S. seat, W. abutment, bridge over English river	128·80	128·99
	Base of G.T.R. rail, crossing	129·86	130·05
	Base of G.T.R. rail, crossing	129·60	129·79
	Base of G.T.R. rail, at Howick Junction	132·54	132·73
	Base of G.T.R. rail, opposite B.M. DCCCXV	132·28	132·48
DCCCXV.	On S. face of culvert, 245 ft. W. of mile 37	129·26	129·46
	Base of G.T.R. rail, crossing	131·45	131·65
735	+On N.E. corner of W. abutment, bridge over Chateauguay river	129·47	129·67
	Base of rail, centre of bridge over Chateauguay river	132·23	132·43
DCCCXIV.	On W. face of W. abutment, bridge over Chateauguay river	129·25	129·45
	Base of G.T.R. rail, crossing	131·45	131·65
	Base of G.T.R. rail, opposite B.M. DCCCXIII	138·07	138·28
DCCCXIII.	On N. face of culvert, 1,600 ft. W. of mile 39	135·58	135·79
	Base of G.T.R. rail, opposite B.M. 734	141·98	142·19
734	+On boulder 8·85 ft. N. of track and 715 ft. W. of mile 40	140·88	141·09
	Base of G.T.R. rail, crossing	140·74	140·96
	Base of G.T.R. rail, opposite B.M. DCCCXII	137·01	137·24
DCCCXII.	On N. end of W. face of culvert, 195 ft. S. of mile 42	129·96	130·19
	Base of G.T.R. rail, at St. Louis station	135·55	135·78
	Base of G.T.R. rail, at St. Louis station crossing	135·23	135·46
	Base of G.T.R. rail, centre of bridge over St. Louis river	135·71	135·94
DCCCXI.	On N. face of N. pier of G.T.R. bridge over St. Louis river	129·08	129·31
	Base of G.T.R. rail, at crossing, St. Louis	136·28	136·51
	Base of G.T.R. rail, at crossing, St. Louis	140·99	141·23
	Base of G.T.R. rail, at crossing, St. Louis	143·02	143·26
733	On N.W. corner of culvert, 1,580 ft. S. of mile 45	142·38	142·62
	Base of G.T.R. rail, opposite B.M. DCCCX	157·35	157·60
DCCCX.	On N. end of W. face of culvert, opposite mile post 89	153·14	153·39
	+ Base of G.T.R. rail, opposite B.M. 732	163·19	163·44
732	On boulder, 25 ft. E. of track and 2,000 ft. N. of mile 89	161·05	161·30
	Base of G.T.R. rail, at crossing	163·01	163·27
DCCCIX.	+On W. face of culvert, 355 ft. N. of mile 47	159·80	160·06
	Base of G.T.R. rail, opposite B.M. 731	162·96	163·22
731	+On S. end of culvert 355 ft. N. of mile 47	160·53	160·79
	Base of G.T.R. rail, at Cecile Junction	149·57	149·84
	Base of G.T.R. rail, crossing S. side of Beauharnois canal	153·22	153·49
730	+On E. end of S. abutment of bridge over Beauharnois canal	153·52	153·79
	Base of G.T.R. rail, centre of bridge over Beauharnois canal	153·46	153·73
DCCCVIII.	On S. face of sluice portal, 1¼ miles E. of lock 1	143·44	143·71
	Base of G.T.R. rail, at crossing, N. side of canal	153·35	153·62
	Base of G.T.R. rail, at crossing	149·22	149·49
	Centre of bridge over M.C.C. mills channel	148·22	148·49
DCCCVII.	On E. end of N. abutment of bridge over tail race of M.C.C. mills	142·84	143·11
	Base of G.T.R. rail, at crossing, Valleyfield	149·94	150·21
	Base of G.T.R. rail, opposite B.M. DCCCVI	155·08	155·36
DCCCVI.	On E. face of culvert, E. of Valleyfield iron works crossing	151·33	151·61

SESSIONAL PAPER No. 19a

Rouses' Point to Montreal, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail at Valleyfield Iron Works crossing	155·49	155·77
DCCCV.	On W. end of Laroque House, Valleyfield	157·23	157·51
	+On coping S. end of lower gates, lock No. 14, Valleyfield	154·34	154·62
	+On coping N. end of lower gates, lock No. 14, Valleyfield	154·30	154·58
	+On coping S. end of upper gates, lock No. 14, Valleyfield	154·36	154·64
729	+On coping, N. end of upper gates, lock No. 14, Valleyfield	154·29	154·57
	Centre of M.C.C. bridge over S. channel, Valleyfield	157·24	157·52
DCCCIV.	On retaining wall S. end of bridge over N. channel, Valleyfield	157·67	157·95
	Centre of M.C.C. bridge over N. channel, Valleyfield	158·00	158·28
	Base of G.T.R. rail crossing, Valleyfield station	158·63	158·91
	Base of G.T.R. rail, Valleyfield station	160·20	160·48
	Base of G.T.R. rail, crossing, Valleyfield	157·70	157·99
DCCCIII.	On N. face of S. abutment of bridge over 3rd channel of St. Lawrence river	171·04	171·34
	Centre of G.T.R. bridge over 3rd channel, St. Lawrence river	173·72	174·02
DCCCII.	On S. face of N. abutment of bridge over 3rd channel of St. Lawrence river	171·06	171·36
DCCCI.	On N. face of S. abutment of bridge over 2nd channel of St. Lawrence river	171·42	171·72
	Centre of G.T.R. bridge over 2nd channel, St. Lawrence river	173·85	174·15
DCCC.	On S. face of N. abutment of bridge over 2nd channel of St. Lawrence river	171·42	171·72
DCCXCIX.	On N. face of S. abutment of bridge over steamboat channel of St. Lawrence river	171·36	171·66
	Centre of G.T.R. bridge over steamboat channel of St. Lawrence river	173·89	174·19
DCCXCVIII.	On S. face of N. abutment of bridge over steamboat channel of St. Lawrence river	171·36	171·66
	Base of G.T.R. rail, centre of overhead crossing	174·00	174·30
	Base of G.T.R. rail, centre of overhead crossing, S. side of Soulanges canal	173·99	174·30
	Base of G.T.R. rail, centre of G.T.R. bridge, over Soulanges canal	174·12	174·43
DCCXCVII.	On N. face of N. abutment of G.T.R. bridge over Soulanges canal	174·11	174·42
CCCCXXVIII.	On E. face of overhead crossing of road, N. side of Soulanges canal	160·85	161·17
547	Iron bolt in W. wall of crossing of road, S. side of canal	160·99	161·30
CCCCXXIX.	On N. face of stone block, lower end of bridge over canal	158·76	159·07
	Coping N. end of upper gates of lock 1, Soulanges canal	158·00	158·31
	Coping S. end of upper gates of lock 1, Soulanges canal	157·99	158·30
	Coping S. end of lower gates of lock 1, Soulanges canal	158·02	158·33
	Coping N. end of lower gates of lock 1, Soulanges canal	158·04	158·34
546	Iron bolt in W. wall of crossing of road, N. side of canal	159·44	159·76
	Base of G.T.R. rail over road along N. side of canal	174·09	174·40
	Base of G.T.R. rail, crossing along branch to Valleyfield	159·70	160·01
624	+On coping S.W. corner of highway bridge over Delisle river	158·40	158·71
DLXXIX.	On W. face of S. abutment of highway bridge over Delisle river	156·43	156·74
	Base of G.T.R. rail, crossing W. shore of Delisle river	160·79	161·10
	Base of G.T.R. rail, centre of bridge over Delisle river	160·88	161·19
DCCCLXIV.	On S. end of E. abutment of bridge over Delisle river	158·83	159·14
	Base of G.T.R. rail, crossing E. shore of Delisle river	160·90	161·21
	Base of G.T.R. rail at Riviere Rouge crossing	161·73	162·04
	Base of G.T.R. rail at Riviere Rouge station	161·34	161·65
DCCCLXIII.	On N. face of W. abutment of bridge over Riviere Rouge	157·74	158·05
	Base of G.T.R. rail, centre of bridge over Riviere Rouge	160·96	161·27
DCCCLXII.	Base of G.T.R. rail, opposite B.M. DCCCLXII	159·31	159·62
	On E. face of N. end of culvert, 15 ft. W. of mile 34	151·11	151·42
	Base of G.T.R. rail, St. Emmanuel crossing	162·96	163·28
	Base of G.T.R. rail, opposite B.M. DCCCLXI	162·72	163·04
DCCCLXI.	On S. end of E. wall of culvert, 40 ft. of mile 33	159·28	159·60
DCCCLX.	Base of G.T.R. rail, opposite B.M. DCCCLX	152·03	152·35
	On S. end of W. wall of culvert, 784 ft. W. of mile 31½	149·59	149·91
	Base of G.T.R. rail at St. Dominique crossing	156·68	157·00
	Base of G.T.R. rail at St. Dominique station	157·20	157·52
	Base of G.T.R. rail at Cedars crossing	159·43	159·75
749	On N. end of E. side of culvert at Cedars station	158·94	159·26
	Base of G.T.R. rail at Cedars station	159·45	159·77
	Base of G.T.R. rail, 1st crossing E. of Cedars station	158·68	159·01
DCCCLIX.	Base of G.T.R. rail, opposite B.M. DCCCLIX	123·54	123·87
	On W. end of E. face of culvert, 193 ft. E. of mile 26½	118·77	119·10
	Base of G.T.R. rail, 2nd crossing E. of Cedars station	119·00	119·33
	Base of G.T.R. rail, opposite B.M. DCCCLVIII	92·05	92·38
DCCCLVIII.	On W. end of S. face of culvert, 1,480 ft. W. of mile 25½	90·97	91·30
	Base of G.T.R. rail, opposite B.M. DCCCLVII	83·79	84·12
DCCCLVII.	On S. end of E. ballast wall of culvert, 735 ft. E. of mile 25	78·91	79·24
	Base of G.T.R. rail, crossing of road to Cascades village	84·54	84·87

ROUSES' Point to Montreal, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
	Base of G.T.R. rail, opposite Vaudreuil station	84·76	85·09
	Base of C.P.R. rail, opposite Vaudreuil station	86·07	86·40
	Base of G.T.R. rail, opposite B.M. DCCCXV	89·63	89·96
CCCCXV.	On S. end of W. abutment, G.T.R. bridge over Ottawa river at Vaudreuil	88·30	88·61
	Base of G.T.R. rail, opposite B.M. CCCCXIV	93·23	93·56
CCCCXIV.	On S. end of E. abutment, G.T.R. bridge over Ottawa river at Vaudreuil	91·94	92·27
	Base of G.T.R. rail, crossing road along W. shore Ile Perrot brook	93·22	93·55
	Base of G.T.R. rail, crossing road along E shore Ile Perrot brook	90·03	90·35
CCCCXIII.	On N.W. face of W. abutment of G.T.R. bridge, Ile Perrot brook	92·01	92·33
	Base of G.T.R. rail, centre G.T.R. bridge, Ile Perrot brook	96·59	96·91
	Base of G.T.R. rail, opposite B.M. CCCCXII	105·27	105·59
CCCCXII.	On N.W. end of W. abutment of G.T.R. bridge over Ottawa river at Ste. Anne de Bellevue	105·54	105·86
	Base of C.P.R. rail, opposite Ste. Anne de Bellevue station	117·75	118·07
	Base of G.T.R. rail, crossing to C.P.R. station	116·76	117·08
	Base of G.T.R. rail, opposite Ste. Anne de Bellevue station	121·22	121·54
	Base of G.T.R. rail, opposite B.M. DCCCLVI	120·37	120·69
DCCCLVI.	On W. end of S. face of C.P.R. culvert, 660 ft. W. of G.T.R mile 20	113·31	113·63
	Base of C.P.R. rail, opposite Bay View station	114·12	114·44
	Base of G.T.R. rail, opposite Baie D'Urfé station	114·12	114·44
	Base of G.T.R. rail, opposite B.M. DCCCLV	113·62	113·94
DCCCLV.	On E. end of S. face of G.T.R. culvert, 123 ft. E. of mile 19	109·04	109·36
	Base of G.T.R. rail, opposite B.M. DCCCLIV	105·76	106·08
DCCCLIV.	On W. end of S. face of G.T.R. culvert, 210 ft. W. of mile 18.	97·93	98·25
	Base of C.P.R. rail, opposite Beaurepaire station	106·85	107·17
	Base of G.T.R. rail, opposite Beaurepaire station	105·64	105·96
	Base of G.T.R. rail, opposite culvert, opposite G.T.R. mile 17.	93·82	94·14
DCCCLIII.	On E. end of S. face of C.P.R. culvert, opposite G.T.R. mile 17.	83·66	83·98
	Base of G.T.R. rail, opposite B.M. DCCCLII	105·56	105·87
DCCCLII.	On W. wall of G.T.R. culvert, 872 ft. E. of mile 16	102·40	102·71
	Base of G.T.R. rail, opposite Beaconsfield station	105·13	105·44
	Base of C.P.R. rail, opposite Beaconsfield station	106·95	107·26
	Base of G.T.R. rail, opposite Beaconsfield crossing	104·97	105·28
	Base of G.T.R. rail, opposite B.M. DCCCLI	103·09	103·40
DCCCLI.	On E. end of N. face of G.T.R. culvert, 745 ft. S. of mile 15	96·62	96·93
	Base of G.T.R. rail at Pointe Claire station	108·11	108·42
	Base of C.P.R. rail at Cedar Park station	111·71	112·02
	Base of G.T.R. rail at crossing	103·71	104·02
	Base of G.T.R. rail at Lakeside station	96·88	97·18
	Base of C.P.R. rail at Lakeside station	96·71	97·01
	Base of G.T.R. rail at Lakeside crossing	96·58	96·88
	Base of G.T.R. rail, culvert 1,610 ft. W. of mile 13	96·32	96·62
DCCCL.	On E. end of S. face of culvert, 1,610 ft. W. of mile 13	89·13	89·43
	Base of G.T.R. rail, centre of G.T.R. culvert, 220 ft. W. of Valois station	90·13	90·43
CCCCI.	On S. base of W. wall of G.T.R. culvert, 220 ft. W. of Valois station	73·86	74·16
	Base of G.T.R., opposite Valois crossing	89·60	89·90
	Base of G.T.R., opposite Valois station	89·78	90·08
	Base of C.P.R. rail, opposite Valois station	89·14	89·44
	Base of G.T.R. rail, opposite B.M. DCCCXLIX	89·24	89·54
DCCCXLIX.	On W. face of wall of culvert, 511 ft. E. of mile 12½	77·68	77·98
	Base of G.T.R. rail, opposite Strathmore crossing	89·44	89·74
	Base of G.T.R. rail, opposite Strathmore station	89·42	89·72
	Base of G.T.R. rail, opposite B.M. DCCCXLVIII	88·70	89·00
DCCCXLVIII.	On W. end of N. face of culvert, 585 ft. E. of mile 11½	86·09	86·39
CCCXCVIII.	On rear base, W. side of Dorval R. C. church	93·55	93·85
	Base of G.T.R. rail, opposite Dorval crossing	85·26	85·56
	Base of G.T.R. rail, opposite Dorval station	85·25	85·55
	Base of C.P.R. rail, opposite Dorval station	89·01	89·31
	Base of G.T.R. rail, opposite B.M. 747	88·75	89·05
747	On S.E. peak of culvert, 171 ft. W. of mile 9½	87·88	88·18
DCCCXLIII.	On S.E. face of W. wall of culvert, 171 feet W. of mile 9½	80·61	80·91
	Base of G.T.R. rail, opposite Dixie station	95·97	96·26
	Base of G.T.R. rail, opposite Dixie crossing	96·63	96·92
	Base of G.T.R. rail, opposite B.M. DCCCXLII	97·68	97·97
DCCCXLII.	On S.E. face of culvert, 1,520 feet E. of mile 9, W. of Montreal.	92·65	92·94
	Base of G.T.R. rail, opposite culvert, 905 feet W. mile 8, W. of Montreal	86·08	86·37
DCCCXLI.	On S.W. face of G.T.R. culvert, 905 feet W. of mile 8, W. of Montreal	82·90	83·19

SESSIONAL PAPER No. 19a

Rouses' Point to Montreal, &c.—Complete List of Bench Marks, &c.—*Continued.*

Bench Marks.	Location and Description.	Elevations.	
		Instrumental.	Adjusted.
746	On S.W. corner of G.T.R. culvert, 905 feet W. of mile 8, W. of Montreal	85·53	85·82
	Base of G.T.R. rail, opposite Lachine main station	80·20	80·49
CCCXCVI.	On S.E. corner of McRae's house on Lachine Rd., to Lachine wharf	79·20	79·49
	Base of G.T.R. rail, crossing of Electric Ry., branch to Lachine wharf	75·36	75·65
745	On N.W. peak of culvert 1,820 feet E. of mile 8, W. of Montreal	77·15	77·44
	Base of G.T.R. rail, opposite B.M. DCCCXL	77·13	77·42
DCCCXL.	On E. face of W. wall of culvert, 1,820 feet E. of mile 8, W. of Montreal	72·59	72·88
	Base of G.T.R. rail, 18th Avenue crossing, Lachine	77·05	77·34
	Base of G.T.R. rail, opposite convent, Lachine	76·86	77·15
	Base of G.T.R. rail, opposite Dominion station, Lachine	76·55	76·84
DC.	On W. end of S. face of guard wall, S. end of Curran bridge, Montreal	54·66	54·90
DCCCXLVII.	On N.W. corner, foundation of freight shed, close to track, Mountain St.	46·69	46·95
	Base of G.T.R. rail at Mountain St. crossing, Montreal	45·76	46·02
	Base of G.T.R. rail at Richmond St. crossing, Montreal	45·68	45·94
DCCCXLVI.	On E. base, front of St. Cunégonde R.C. church, Montreal	55·54	55·80
	Base of G.T.R. rail, opposite St. Henri station	59·84	60·10
DCCCXLV.	On S. foundation of J. Duffy's house, St. Philippe street	63·86	64·12
	Base of G.T.R. rail, Côte St. Paul Rd. crossing	62·24	62·52
	Base of G.T.R. rail, opposite B.M. DCCCXLIV	60·70	60·98
DCCCXLIV.	On boulder, 12 feet N. of track and 405 feet E. of Montreal W. station	59·77	60·05
	Base of G.T.R. rail, opposite Montreal W. station	60·87	61·15
	Base of G.T.R. rail, opposite B.M. 748	61·88	62·16
748	On boulder, 15·4 feet N. of track, 435 feet E. of mile 5, W. of Montreal	58·78	59·06
	Base of G.T.R. rail at Rockfield station crossing	70·81	71·10
	Base of G.T.R. rail at Rockfield station	71·47	71·76
DCCCXXXIX.	Base of S. wall of C.P.R. crossing of G.T.R., Rockfield	76·15	76·44
	Base of G.T.R. rail, centre of crossing, under C.P.R., Rockfield	72·77	73·06
	Base of C.P.R. rail, centre of crossing of G.T.R., Rockfield	105·24	105·53
744	On W. end of S. wall of C.P.R. crossing of G.T.R., Rockfield	105·15	105·44
	Base of C.P.R. rail, centre of overhead crossing of Lachine Rd.	105·01	105·30
	Base of C.P.R. rail, centre of swing bridge over Lachine canal	108·13	108·42
DLXXXI.	On W. face of S. pier of C.P.R. swing bridge over Lachine canal	74·53	74·81
743	On S.W. end of S. abutment of C.P.R. swing bridge over Lachine canal	109·12	109·40
	Base of C.P.R. rail at Highlands station, Lachine, P.Q	115·88	116·11
	Base of C.P.R. rail, centre of C.P.R. crossing of Lachine lower road	121·90	122·18
CCCXCIII.	On W. side of first pier of C.P.R. bridge, Lachine	93·85	94·13

FRENCH RIVER.

LIST OF PERMANENT BENCH MARKS SET ALONG FRENCH RIVER, BETWEEN NORTH BAY TOWN AND FRENCH RIVER VILLAGE ON GEORGIAN BAY.

ELEVATIONS BASED ON CHALONER'S DETERMINATION OF THE "CHIPPEWA" BENCH MARK AT NORTH BAY—649·86 ABOVE MEAN SEA LEVEL.

This elevation was carried to Frank's Bay across Lake Nipissing by water level transfer as deduced from simultaneous gauge observations at both places.

The canal levels for the French river, as shown on plan, are based on the elevations as published below and are not therefore subject to the corrections mentioned at the beginning of this report.

In the following list column No. 1 gives the Bench Marks set by this survey. Column No. 2 gives the Bench Marks set by the late J. W. Fraser during his survey in 1891. All his elevations have been reduced to the above mentioned datum.

The total length of this line from North Bay to Georgian Bay is 81 miles.

The levelling was done with the greatest care by Mr. F. H. Peters, Engineer for the Lake Nipissing work, under the direction of the District Engineer, S. J. Chapleau.

SESSIONAL PAPER No. 19a

(All Bench Marks are marked with cold chisel in rock, as well as paint.)

G.B.S.C.S. Number.	Fraser. Number.	Locality and Description.	Elevation.
1	1	Frank's Bay, on ledge of rock 50′ from shore, end of wharf, north side — 1 (in yellow paint)	648·18
	2	Near east end of Partridge Island, on south side, in rock, marked 2 —, yellow paint	647·80
	4	On rock, south side, about ½ mile above Chaudiere portage and near junction of ledge of rock and plateau, marked 4 — yellow paint.	650·177
2	.....	Drilled semi-circle around point of rock, about 150′ south of pine stump, marked △38. On point of island, separated from Chaudiere island by small channel to Dukes bay.	643·69
	5	On rock, right side of Chaudiere portage and about 100′ from west end, marked — 5, yellow paint	651·059
	9	On rock, at mouth of Restoul river, on east side. Tree in front of it cut off, flattened on face and two sides, with two cut branches left on top. Blazed faces, painted yellow. Yellow 9 in rock and	624·202
8	.....	On small island, west of mouth of Restoul river, on south shore. On root of tree, which is also △	620·996
9	.....	On point of rock on south shore on point west of Hales group of islands. Painted white	615·076
10	.....	On ledge of rock on south side of small island on which is △ ≒ 61, and separated from point by small channel	615·649
11	.....	On white pine tree, on east side of point on which is △ ≒71. About ½ mile above Little Pine rapids, on east side of south channel	619·764
	10	At head of Little Pine rapid, on left side, on high rock. Broad cut in rock under point and 10 painted on rock in yellow	624·918
12	.....	On rock, on point, on right side, opposite little island about 2,000′ below Big Pine rapid, marked 12. Red paint; visible from river	610·790
13	.....	On rock, at head of Big Parisian rapid, on right side, marked ↗ 13, in red paint; visible from river	607·958
14	.....	On rock, on left of large island (Big Bluff island), above current, below Big Parisian rapid, about 90′ down from up stream point. Marked ↗ 14, in red paint: visible from river	605·840
15	.....	On point of rock, right side, about 1,500′ above Little Parisian rapid, marked ↑ 15, in red paint; visible from river	600·637
16	.....	On high point of rock, on right side, about 1¾ miles below Little Parisian rapid, marked → ↑ ← 16, in red paint; visible from river	601·094
17	.....	On side of steep rock, in inche on right side of south channel into Dry Pine lake, about 300′ up from point of channel on left at Dry Pine lake. Marked ↘ 17, in red paint; visible from river	600·910
18	.....	On rock, on left side of river, about 1,500′ above Recollet rapid. About 500′ above very high walled cliff, on right side, which is just above rapid. Marked ↗ 18, in red paint. Also, 10′ down stream, on small white birch stump, is sign-board with red paint. Marked B.M. 18; visible from river	600·805
	16	On left side of river at foot of Recollet falls, on point of rock. Marked 16, in yellow paint	593·176
19	.....	On small point, on rock, right side of river, about 300′ below small rock island, which is in sharp bend to right, ¾ mile above head of Potvin's island. Marked ↑ 19, in red paint; visible from river	590·266
	18	At second rapid, below Recollet rapid, on rock on right side, opposite little island. Marked ↑ 18, in yellow paint	594·146
20	.....	On rock, on rock point on right, 1,500′ below second rapid, below Recollet rapid. Marked ↓ 20, in red paint; visible from river	589·564
21	.....	On rock, on right side 3,500′ below head of swift current, below second rapid. Marked ↑ 21, in red paint; visible from river	589·682
22	.....	On rock, on right side of small bay on right side at junction of French river and Pickerel river, straight in from large island. Marked ↑ 22, in red paint; visible from water	590·415
23	.....	On sloping face of rock, on right side of little bay on right side of main channel, just up stream 1,000′ from where main channel turns sharp to right to Dalles rapid	592·357
	19	At head of Dalles rapid, on left side on rock	591·908
	20	On point of rock, left side of river, about 200′ below point where river turns south to French River village. Marked ↑ 20, in yellow paint.	586·260
24	.....	On rock, on left side of river. Marked 24, in red paint. About 1,580′ below head of swift, below Dalles rapid	585·423
26	.....	'Peter's B.M.' top of iron ring bolt, set in solid rock about 250′ southwest of Ontario Lumber Co.'s dock	590·628
25	.....	Point of rock removed about 15′ from ring bolt and nearer river. Marked ↑ 22, in red paint	587·467

MEAN TIDE AT QUEBEC.

The following information and deductions with regard to Mean Sea Level at New York compared with its determination at Quebec, as made by Dr. W. Bell Dawson from the Tidal Survey observations at the Dry Dock at Levis, will prove of interest.

The tidal observations have been obtained by a registering tide gauge, giving a continuous record day and night throughout the year, and reduced to a uniform datum.

The comparison is based upon the elevations of the sill of Old Lock No. 1 of the Lachine Canal, at the head of Montreal Harbour; where the levels meet which have been carried through from New York via Rouses' Point, and along the St. Lawrence from Quebec by Mr. R. Steckel.

Dr. Dawson, who is in charge of the Tidal and Current Survey for the Department of Marine and Fisheries, has reduced these levels to the Admiralty Low Water datum at Quebec, as used for the chart of Quebec Harbour. This datum has also been adopted by the Tidal Survey as the plane of reference for the Quebec Tidal Tables. It is defined by the Admiralty in their own publications, as 28·90 feet below the Bench Mark cut on the east side of the principal gateway to the Marine and Fisheries building in Quebec.

The various connections by means of which the reductions are made, are as follows:— From the Admiralty Bench Mark in Quebec to the Levis Dry Dock where the Tide Gauge is situated, connected by Mr. Steckel's levels across the river; one of his Bench Marks being set in the masonry of the dry dock. From Levis to Montreal, connected by Mr. Steckel's levels. From Montreal to Rouses' Point, from the levels of the Georgian Bay Canal Survey, which there connect with the United States Coast Survey levels from New York. The elevation taken for the Coast Survey Bench Mark at Rouse's Point is the revised value of 1903. The difference between Mr. Steckel's datum and that of the Georgian Bay Canal Survey, is based on a common Bench Mark at St. Lambert.

Admiralty bench mark at Quebec, as above described.....	28·00
Sill of old lock No. 1, Lachine canal. Difference of level as determined by Mr. R. Steckel, 15·59 feet above the Admiralty bench mark at Quebec. Resulting elevation.....	12·50
Mean sea level, or half tide at Quebec, as determined at the Levis dry dock: from the hourly ordinates of the tide during eight years of continuous observations, from 1894 to 1902. Mean of the eight years, 8·584 feet above the Admiralty datum.....	8·58
(The value adopted by the Royal Engineers in 1864, for mean sea level in Quebec Harbour, was 8·72 feet above the Admiralty datum. This would be some distance above the dry dock).	
Mean sea level at New York determined by the Georgian Bay Canal Survey, as 5·38 feet below the sill of old lock No. 1, Lachine canal.....	7·12
Steckel's datum referred to the Admiralty datum: the elevation of the Admiralty bench mark above his datum, being 27·039 feet.....	0·96
Admiralty low water datum at Quebec; adopted as the datum for the tidal survey.....	0·00
It thus appears that mean sea level or half tide at Quebec, when accurately determined by tidal observations, is 1·46 feet above mean sea level at New York.	

ELEVATIONS ABOVE MEAN SEA LEVEL OF LOW WATER SURFACE AT DIFFERENT POINTS ALONG THE PROPOSED GEORGIAN BAY SHIP CANAL ROUTE, AS BASED ON PRECISE LEVEL LINES.

St. Lawrence River, at Bout de l'Ile	16·0
Montreal Harbour, opposite Custom House	19·0
St. Lawrence River at Victoria Bridge (Approx.)	25.0
St. Lawrence River foot of Lachine Rapids (opposite Crawford's, Verdun)	35.0
St. Lawrence River head of Lachine Rapids (Head Race M. L.H. & P. Co.)	59·5
Lake St. Louis (Lachine)	66·0
Ottawa River, St. Anne de Bellevue	66·7
Lake of Two Mountains	70·0

RIVIERE DES PRAIRIES.

River St. Lawrence, Bout de l'Ile	16·0
Rivière des Prairies Village (below Rapid)	18·4
Rivière des Prairies Village (above Rapid)	25·4
Sault au Recollet (foot of second Rapid)	26·8
Sault au Recollet (head of second Rapid)	38·5
Sault au Recollet, Viau Bridge	42·0
Sault au Recollet, foot of first Rapid)	42·5
Sault au Recollet (head of first Rapid)	52·0
Cartierville Bridge	54·0
White Horse Rapid (foot)	54·7
White Horse Rapid (head)	58·7
Dutchmen's Rapid (foot)	62·2
Dutchmen's Rapid (head)	70·0

Carillon Canal (lower)	70·2
Carillon Canal (upper)	83·6
Grenville Canal (lower)	84·7
Grenville Canal (upper)	127·8
East Templeton	128·4
Ottawa (Rideau Locks)	129·3
Booth's head race	167·6
Little Chaudière Rapids	176·5
Remicks Rapid	180·2
Deschênes Rapid (foot)	180·8
Deschênes Rapid (head)	190·7
Deschênes Lake, Fitzroy Harbour	190·8
Chats Falls (above)	239·4
Arnprior	239·6
Cheneaux Rapids (foot)	239·8
Cheneaux Rapids (head)	240·2
Portage du Fort (foot)	240·7
Portage du Fort (head)	255·4
Sable Rapid (foot)	256·8

ELEVATIONS above Mean Sea Level of low water surface, &c.—*Continued.*

Sable Rapid (head)	263.0
Mountain Chute (foot)	264·0
Mountain Chute (head)	278·5
D'Argis Rapid (foot)	278·7
D'Argis Rapid (head)	284·7
Calumet Rapid	285·1
Bryson	342·1
La Passe or Lower Point	343·4

ROCHER FENDU CHANNEL.

Head of Portage du Fort	255.4
Rocher Fendu Chute (foot)	256·0
Rocher Fendu Chute (head)	260·0
Flat Rapid (foot)	260·1
Flat Rapid (head)	261·1
Long Rapid (foot)	262·2
Long Rapid (head)	277·7
La Barriere Rapid (foot)	277·8
La Barriere Rapid (head)	278·5
Muskrat Rapid (foot)	279·1
Muskrat Rapid (head)	286·8
Garvins Chute (foot)	298·7
Garvins Chute (head)	323·0
Des Jardins Rapids (foot)	323·6
Des Jardins Rapids (head)	336·0
Foot of dam	338·7
Head of dam	343·2
Paquette Rapid (foot)	344·0
Paquette Rapid (head)	352·0
Allumette Rapid (foot)	352·4
Allumette Rapid (head)	365·1
Pembroke	365·3
Des Joachims Rapids (foot)	365·5
Des Joachims Rapids (head)	390·5

CULBUTE CHANNEL.

Paquette Rapid (foot)	344·0
Chapeau	344·5
Culbute Chute (foot)	344·8
Culbute Chute (head)	365·0
Fort William	365·4

Rockliffe	391·2
McSorley's Rapid (foot)	393·0
McSorley's Rapid (head)	396·3
Mirabeau Rapid (foot)	393·5
Mirabeau Rapid (head)	398·8
Rocher Capitaine Rapid (foot)	398·9
Rocher Capitaine Rapid (head)	441·4
Doyles' Rapid (foot)	441·7

ELEVATIONS above Mean Sea Level of low water surface, &c.—*Concluded.*

Doyles' Rapid (head)	442·8
Deux Rivières Rapid (foot)	443.1
Deux Rivières Rapid (head)	457·2
Trou Rapids (foot)	457·7
Trou Rapids (head)	464·8
La Veillee Rapids (foot)	467·4
La Veillee Rapids (head)	474·2
1½ miles east of Klock	475·6
Klock (foot of Rocky Farm Rapids)	476·9
Rocky Farm Rapids (head)	479·0
Burritt's Rapids (foot)	480·0
Burritt's Rapids (head)	482·0
Mattawa (foot of Johnson's Rapids)	483·0
Johnson's Rapids (head)	487·4
Boom Lake	496·8
Lake Plain Chant	517·7
Head of Les Epines Rapids	519·7
Head of Les Roses Rapids	526·1
Bouleau Lake	532·1
Foot of Deep River	532·6
Paresseux Falls (foot)	532·7
Paresseux Falls (head)	570·6
Talon Chute (foot)	589·0
Talon Lake	633·2
Falon Lake	637·2
Whitefish Lake	639·7
Moose Pond	658·4
Wolfe Pond	659.2
Turtle Lake	662·8
Trout Lake	662·9
Lake Nipissing (North Bay)	638·2
Chaudière Falls (below)	614·0
Restoul River	613·2
1st W. L below Little Pierre	611·0
2nd W. L. below Little Pierre	610·6
Big Pierre Rapid (head)	609·4
Big Pierre Rapid (foot)	604·9
Double Rapid Current (head)	604·8
Double Rapid Current (foot	604·5
Double Rapid (head)	604·5
Double Rapid (foot	601·1
Parisian Rapid (head)	600·3
Parisian Rapid (foot)	596·6
Little Parisian Rapid (foot)	594·2
Little Parisian Rapid (head)	595·2
Horseshoe (below	584·0
Dalles Rapid (head)	583·8
Dalles Rapid (foot)	579·4
Georgian Bay	578·5

CONCLUSION.

The condensed information and elevations as contained in this report are given in the hope that the whole may be of some benefit to the other technical branches of the Government and to the engineering profession.

This part is published separately from the main report on the proposed Georgian Bay ship canal, in order that the information regarding this important branch of our work should be more readily available.

Respectfully submitted,

A. ST. LAURENT,

Assistant Chief Engineer and Engineer in charge.

Approved.

EUGENE D. LAFLEUR,

Chief Engineer.

INDEX

OF

PLACES WHERE BENCH MARKS HAVE BEEN LOCATED.

A.

Pages.

Alfred 117
Allandale 129
Angus 82, 129
Arnprior 63, 119
Atherley Junction 91, 131
Aubrey 101, 140
Aurora 79, 128
Avondale 119

B.

Baie D'Urfe 142
Bainsville 114
Barrie 81, 86, 129
Barrydale Crossing 136
Bass Lake 122
Batteaux River 84, 130
Bayview station 142
Beaconsfield 142
Beaudette River 49, 114
Beauharnois Canal 140
Beaurepaire station 106, 142
Big Parisian Island 145
Big Parisian Rapid 145
Bissetts 122
Blackburn 118
Black River 114
Bonfield 124
Bonnechere River 120
Boundary line—U.S.A. and Canada 37, 111, 139
Bracebridge 93, 134
Bradford 128
Braeside 119, 120
Brennans Lake 122
Brentwood 130
Britannia 62, 118
Brook "The" 57, 117
Brosseau 41, 112
Burk's Falls 95, 136

INDEX of Places where Bench Marks have been located—*Continued.*

C.

Pages.
Cadieux 116
Caledonia Springs 56, 117
Callender 97, 138
Calvin 124
Carp 62, 119
Cascades 47, 113, 141
Castleford station 120
Cecile Junction 140
Cedars 48, 105, 114, 141
Cedar Park station 142
Chaffey 94, 135
Chalk River 68, 122
Chateauguay River 101, 140
Chaudiere Island 145
Chaudiere Portage 145
Chippewa Creek 125, 138
Cobden 120
Coldwater 132
Collingwood 85, 86, 130
Colwell 129
Como 116
Corbeil 125
Cornwall 51, 115
Coteau 104, 114
Coteau du Lac 48, 114
Cote St. Paul 112, 113
Couchiching 131
Craigvale station 129

D.

Dalles Rapids 145
Davenport 77, 127
Delisle River 114, 141
Deux Rivières 70, 123
Dixie 142
Dorval 45, 107, 113, 142
Downsview station 127
Draper 93, 134
Dry Pine Lake 145
Dukes Bay 145

E.

Eau Claire 124
Eganville Junction 120
Elia station 127
Elmsdale station 136
Emmanuel Road 114
English River 140

INDEX of Places where Bench Marks have been located—*Continued.*

F.

Pages.
Falkenburg 134
Fesserton station 89, 132
Foxmead station 132
Frank's Bay 145
French River 145
French River Village 145

G.

Galetta 63, 119
Gilford station 129
Girard 111
Government Road 121
Goulds Brook 120
Gowan station 130
Graham station 121
Grande Ligne 39, 111
Gravenhurst 92, 133

H.

Haley's station 120
Hammond station 117
Hawkesbury 55, 116, 117
Hawkestone 131
Hemmingford Junction 139
Henrysburg 139
Highlands station 143
Holland Landing 128
Holland River 128
Holton station 100, 140
Howick Junction 140
Hudson 116
Hudson Heights 116
Hull 61, 118
Huntsville 94, 135
Hurdmans Bridge 58, 118

I.

Ile aux Noix 39, 111
Ile Perrot 46, 105, 113, 142

J.

Johnson station 100, 139

INDEX of Places where Bench Marks have been located—*Continued.*

K.

Pages.
Kashabogamog River 92, 133
Katrine 95, 136
Kilworthy station 133
Kinburn station 119
King City 78, 128
Klock station 71, 123

L.

Lacadie 41, 112
Lachine 44, 45, 108, 113, 143
Lachine Canal 44, 112, 113
Lachine Wharf 107, 113, 143
Lacolle 37, 38, 99, 111, 139
Lake Nipissing 145
Lakeside 142
Lancaster 50, 114
Lavigne 116
Lefroy 80, 129
Leonard 58, 117
Little Island 145
Little Parisian Rapid 145
Little Pine Island 145
Longford 91, 131
Longueuil 43, 112
Lovers' Creek 81, 129

M.

Mackey station 122
Mad River 129, 130
Magnetawan River 136
Maple 127
Marshalls' Bay station 119
Mattawa 71, 124
Midland 90, 133
Montreal 42, 43, 109, 112, 143
Montreal West station 143
Moor Lake 122
Morrison 92, 133
Muskoka Wharf station 133

Mc.

McAlpin's 56, 117

N.

Nasbonsing 124
Nasbonsing Lake 72
Navan 117

INDEX of Places where Bench Marks have been located—*Continued.*

N.—*Concluded.*

Pages.
New Lowell....83, 130
Newmarket....79, 128
Nipissing District....68, 69, 70, 71
Nipissing Junction....125, 138
Nipissing-Nasbonsing Railway crossing.... 138
North Bay....72, 125, 138
North Toronto....76, 126, 127
Novar.... 135

O.

Orillia....87, 88, 131, 132
Oro station.... 131
Old Fort station.... 133
Ontario Lumber Company's dock.... 145
Ottawa....59, 60, 61, 62, 118

P.

Parkdale North.... 126
Parklands.... 130
Partridge Island.... 145
Pembroke....66, 121
Pendleton.... 117
Petawawa....67, 121
Petawawa wharf.... 121
Pickerel River.... 145
Plantagenet....56, 117
Pointe Claire....46, 113, 142
Pointe Fortune....54, 116
Pointe St. Charles....42, 112
Potvins' Island.... 145
Powassan....97, 137
Prescott County.... 57
Pretti River.... 130

R.

Rama station.... 131
Recollet Falls.... 145
Recollet Rapids.... 145
Renfrew....64, 120
Renfrew County.... 65
Restoul River.... 145
Rideau Canal.... 118
Rigaud....54, 116
River Beaudette....49, 114
Rockfield.... 143
Rockland.... 117
Rockliffe station....69, 122
Rouge River....104, 141
Rouge River road.... 114
Rouses' Point....37, 99, 111, 139
Russell station.... 120
Rutherglen....72, 124

INDEX of Places where Bench Marks have been located—*Continued.*

S

Pages.

Sand Point 63, 120
Scotia Junction 94, 135
Severn station 133
Severn River 133
Silver Creek 132
Simcoe County 79, 80, 81, 82, 83, 84, 87, 88, 92
Snake River 121
Soulanges Canal 102, 103, 113, 114, 141
South March 118
South River 96, 137
Stardale 116
Stayner 130
Stottsville 38, 111
Strathmore 142
Sturgeons Bay station 132
Summerstown 50, 114, 115
Sundridge 95, 136

ST.

St. Anne de Bellevue 46, 113, 142
Ste. Blais de Grande Ligne 39, 111
Ste. Claude 139
Ste. Cunegonde 143
St. Dominique 104, 114, 141
St. Eugene 55, 116
St. Fereol 114
St. Henri 108, 143
St. Johns 40, 111
St. Lambert 41, 112
St. Lawrence River 141
St. Louis station 101, 140
St. Paul 39, 111
St. Valentin de Stottsville 38, 111
St. Zotique 49, 114

T.

Tait station 132
The Brook 57, 117
Thistle station 122
Thorncliffe 125
Thornhill 127
Toronto 73, 74, 75, 77, 126, 127
Toronto Bay 75, 126
Toronto Harbour 74, 75, 126
Toronto Junction 76, 126
Toronto North 76, 126, 127
Trout Creek 96, 137

INDEX of Places where Bench Marks have been located—*Concluded.*

U.

Pages.
Uhthoff 132
Utopia 129
Utterson station 93, 135

V.

Valleyfield 102, 140
Valois 106, 113, 142
Vankleek Hill 117
Vaudreuil 53, 105, 113, 142
Vaudreuil station 47, 113, 142
Vaudreuil County 54
Vaughan Township 127, 128
Vernon River 135
Victoria Harbour 99, 132, 133

W.

Washago 91, 133
Waubaushene 89, 132
Windmill Point 112
Wistawasing River 138
Wylie station 122

Y.

York County 77, 78

CANADA

DEPARTMENT OF PUBLIC WORKS

INTERNATIONAL WATERWAYS COMMISSION

TO DECEMBER 31, 1907

SUPPLEMENT TO REPORT OF 1907

PRINTED BY ORDER OF PARLIAMENT

OTTAWA
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INTERNATIONAL WATERWAYS COMMISSION

SUPPLEMENTARY REPORT TO DECEMBER 31, 1907

OTTAWA, 9th March, 1908.

Honourable WILLIAM PUGSLEY,
Minister of Public Works,
Ottawa, Ont.

Mr. MINISTER,—The Canadian members of the International Waterways Commission have the honour to submit the following progress report covering their work for the calendar year ending December 31st, 1907.

Dr. W. F. King, a member of the commission since its organization, having resigned, Mr. W. J. Stewart, the Dominion Hydrographer, was appointed in his place.

CHICAGO DRAINAGE CANAL.

The Commission during the year, agreed upon a joint report with regard to the diversion of water from Lake Michigan by the Chicago Drainage Canal, which will be found in Volume 2, of the report of the Minister of Public Works for the year 1906, at page 173. The commission have agreed upon the following recommendations:

The waters of Lake Michigan in the United States, the waters of Georgian bay in Canada, and the waters of Lake Superior, partly in the United States and partly in Canada, all form sources of supply to the Great Lakes system, finding their way by the St. Lawrence to the sea. All are interdependant, and there can be no diversion from any of them without injury to the whole system. By Article XXVI. of the Treaty of 1871 'navigation of the River St. Lawrence, ascending and descending from the forty-fifth parallel of north latitude, where it ceases to form the boundary between the two countries, from, to, and into the sea, shall forever remain free and open for the purposes of commerce to the citizens of the United States, subject to any laws and regulations of Great Britain, or of the Dominion of Canada, not inconsistent with such privileges of free navigation.' It is desirable that in any treaty arrangement the waters of Lake Michigan, Georgian bay, and all other waters forming part of the Great Lakes system should be declared to be 'forever free and open for the purposes of commerce' to the citizens of the United States and the subjects of His Britannic Majesty, subject to any laws and regulations of either country, and not inconsistent with such privilege of free navigation.

The preservation of the levels of the Great Lakes is imperative. The interest of navigation in these waters is paramount, subject only to the right of use for domestic purposes, in which term is included necessary sanitary purposes. In our report of November 15, 1906, upon the application of the Minnesota Canal and Power Company to divert certain waters in Minnesota, we recommended, among other things, 'that any treaty which may be entered into should define the uses to which international waters may be put by either country without the necessity of adjustment in each instance, and would respectfully suggest that such uses should be declared to be (*a*) uses for necessary domestic and sanitary purposes; (*b*) service

of locks for navigation purposes; (c) the right to navigate.' It is our opinion that so far as international action is concerned a treaty provision of that kind is all that is required in this case. We accordingly renew our recommendation of November 15, 1906, just quoted.

A careful consideration of all the circumstances leads us to the conclusion that the diversion of 10,000 cubic feet per second through the Chicago river will, with proper treatment of the sewage from areas now sparsely occupied, provide for all the population which will ever be tributary to that river, and that the amount named will, therefore, suffice for the sanitary purposes of the city for all time. Incidentally it will provide for the largest navigable waterway from Lake Michigan to the Mississippi river, which has been considered by Congress.

We therefore recommend that the government of the United States prohibit the diversion of more than 10,000 cubic feet per second for the Chicago Drainage Canal.

Following this report, the Secretary of War of the United States, under date of March 14th, 1907, declined to grant a permit, for which application had been made by the trustees of the Sanitary District at Chicago, to reverse the flow of the Calumette river. The board, nevertheless, at its session of September 18, 1907, decided to proceed with the construction of the proposed diversion channel, but to first give 'notice of its intention so to do to the Secretary of War and to the Attorney-General that they may, if they see fit, take such steps as they think proper to protect the rights, if any, of the General Government in the premises before the expenditure by the district of any considerable portion of the eight or ten millions of dollars necessary to construct the said channel.' They commenced work on a small scale in October, 1907, as a matter of form, whereupon, at the request of the War Department, the Department of Justice instituted injunction proceedings which are now pending.

The issue raised is one of the greatest moment. If the level of the Great Lakes system is to be maintained, the preservation of the same must necessarily depend upon the joint action of the two governments, as the withdrawal of water from Lake Michigan, in the United States, Georgian bay in Canada, or elsewhere in either country, must necessarily be injurious to the whole system.

Vast interests are involved. The amount by which the mean level will be lowered by the discharge of 10,000 cubic feet now authorized through the Chicago Canal, is estimated as about six inches in Lakes Huron and Michigan, about five inches in Lake Erie and about four inches in Lake Ontario. Any further diversion would mean the necessary expenditure of a very large amount of money to restore depths in harbours and to maintain a uniform draught of fourteen feet in our canal system.

The issue is not one between ourselves and citizens of the United States. The Lake Carriers' Association, representing a great United States investment on these lakes, strongly protests against further diversions, other than those which are absolutely essential for sanitary purposes. Our interests are small compared with theirs, but, in the not very distant future, the development of our Northwest will materially increase our interest in maintaining this great highway, without which such development would not be possible. Vast as the traffic is now, what man can tell to what proportions it will reach in another twenty-five years, or what interests will then be involved?

It will be noticed that the commission find that it is desirable that 'in any treaty arrangement the waters of Lake Michigan and Georgian bay and all other waters forming part of the Great Lakes system should be forever open, for the purposes of commerce, to the citizens of the United States and the subjects of His Britannic Majesty, subject to any laws and regulations of either country not inconsistent with such privileges of free navigation.'

By the treaty of 1871, the St. Lawrence river in Canadian territory was declared to be open and free forever to the citizens of the United States for the purposes of commerce. As set forth in the report, the whole system of waterways forming the

Great Lakes system are interdependent and there should be a common right of user of the whole.

The conflict at Chicago shows the absolute necessity of some treaty arrangement for the preservation of the system and the adoption of certain principles which will control its use. Here we have a vast expanse of navigable water, partly in one country and partly in the other, inseparable and indivisible on national lines. Neither country has any right of property in it and of necessity its use must be in common. It follows, therefore, that such use must be governed and controlled by some joint body. The present International Waterways Commission was created at the suggestion of the United States government, the congress of which passed and approved on June 13, 1902, of an Act containing the following provision:—

The President of the United States is hereby requested to invite the government of Great Britain to join in the formation of an international commission, to be composed of three members from the United States and three who shall represent the interests of the Dominion of Canada, whose duty it shall be to investigate and report upon the conditions and uses of the waters adjacent to the boundary lines between the United States and Canada, including all of the waters of the lakes and rivers whose natural outlet is by the River St. Lawrence to the Atlantic ocean, also upon the maintenance and regulation of suitable levels, and also upon the effect upon the shores of these waters and the structures thereon, and upon the interests of navigation by reason of the diversion of these waters from or change in their natural flow; and, further, to report upon the necessary measures to regulate such diversion, and to make such recommendations for improvements and regulations as shall best subserve the interests of navigation in said waters. The said commissioners shall report upon the advisability of locating a dam at the outlet of Lake Erie, with a view to determining whether such dam will benefit navigation, and if such structure is deemed advisable, shall make recommendations to their respective governments looking to an agreement or treaty which shall provide for the construction of the same, and they shall make an estimate of the probable cost thereof.

This Bill was enacted because of the manifest necessity of some joint regulation and control. Your Commission thought it expedient to first establish principles governing the use and diversion of boundary waters. Once proper principles have been agreed upon, their application by a permanent board must necessarily lead to a uniform course of action, whereas if special matters are dealt with by special commissions, all manner of inconsistent conclusions might and likely would be arrived at. Once principles are agreed upon, and consistently applied, neither country will obtain any advantage. The Commission by their various reports made suggestions and recommendations, from which the following conclusions were drawn:—

'1. The great lakes system, including Lake Michigan and Georgian bay, should be made a common highway for the purposes of navigation to the people of both countries.

'2. The right of either country with respect to such waters is the right of user only.

'3. The primary right of user is for domestic uses (including necessary sanitary purposes) and the services of locks and navigation canals.

'4. Subject to these uses, the use for navigation shall be paramount to all others.

'5. No diversion of these waters shall be permitted to the injury of navigation interests, save such diversions as are necessary for the preservation of the public health (sanitary purposes and domestic use) and service of locks of navigation canals.

'6. Where temporary diversions of such waters without injury to the interests of navigation are possible, they should be permitted so that each country, so far as is practicable, shall receive an equal benefit. This principle is applicable to diversions for power purposes in the St. Mary's and St. Lawrence rivers.

'7. As to streams which cross the international boundary, no diversion of such streams or their tributaries should be permitted in either country so as to interfere

with the natural flow thereof to the injury of private or public rights in the other country; nor should any obstruction be permitted in such streams in one country to the injury of public or private rights in the other.

'8. In Niagara river, diversions would not interfere with navigation, but there a special consideration, the preservation of the scenic beauty of the falls, was brought to play. It was found, however, possible to divert about double the quantity of water on the Canadian side to that possible on the other side, without material injury to the scenic effect.

'9. The Commission have not, for lack of jurisdiction, suggested any principle governing the use, for irrigation purposes, of waters which cross the international boundary, but some principle should be adopted which would have general application. We respectfully submit that all the principles so far adopted by the Commission commend themselves as worthy of adoption.'

The boundary line between these two countries extends across the continent. For a great distance an imaginary line is drawn through boundary waters; elsewhere numerous streams cross and sometimes recross the international boundary. The increased value of water for power and irrigation purposes has given rise to new questions which must be met and settled in some way.

That can only be done effectively by a treaty arrangement between the two countries, as only in that way can joint federal jurisdiction be with certainty asserted. Special commissions, which are the outcome of local disputes, are necessarily partial. The commissioners are advocates. A permanent board removed from local prejudice would apply the principles impartially and should be provided for in any treaty arrangement.

INTERNATIONAL BOUNDARY IN LAKE ERIE.

During the year the Joint Commission have made a report dealing with this matter, which will be found in Volume 2, of the report of the Minister of Public Works. The matter was referred to your Commission by direction of the Secretary of State of the United States with a view to having 'the exact international water boundary line on Lake Erie marked by buoys,' thereby enabling fishermen to readily ascertain the location of the boundary line and also to ascertain whether the United States and Canadian charts of the locality agreed as to the distance to be logged from the gas buoy at Erie, Pennsylvania, to the boundary on the usual fishing ground outside Long point.

At page 230, volume 2, of the Annual Report of the Department of Public Works, for the year 1907, will be found a full account of the 6th Article of the Treaty of Ghent, and the recommendations made by the Commission.

No authority has yet been given to the Commission to proceed further with the matter.

RICHELIEU RIVER.

Under the direction of the Department of Public Works, a report was prepared in 1902 upon the subject of damage by overflow of the Richelieu river and a plan was submitted for correcting the evil. At its last session, Parliament appropriated $10,000 for the proposed works, which would be wholly within Canadian territory, but, inasmuch as they might affect the interests of the United States or of its citizens on Lake Champlain, our government referred the matter to the International Waterways Commission. The question was considered by the Commission as a whole and dealt with by passing the following resolution:—

'Whereas certain valuable lands in the valley of the Richelieu river, the outlet of Lake Champlain, are subject to damage by overflow; and

'Whereas a plan for the reclamation of said lands, submitted by Resident Engineer J. B. Michaud, April 7, 1902, to the Canadian government, was referred by that

government to the International Waterways Commission under date of May 6, 1907; and

'Whereas the international question involved relates only to the effect of the proposed works upon the interests of the United States or of its citizens upon Lake Champlain; and

'Whereas the average level of Lake Champlain is 96·1 feet above tide water, New York, and the monthly mean level during floods is about 100.

'Resolved, That it is the opinion of the International Waterways Commission that the works proposed can be constructed without injury to the interests of the United States or its citizens upon Lake Champlain, provided a movable dam be constructed at St. Johns, and so operated that the flood waters of Lake Champlain shall be allowed to rise to a monthly mean level of 97 and the level of the lake shall hereafter be maintained at or above 95.'

POWER DEVELOPMENT NEAR LONG SAULT ISLAND.

The application of Mr. Smith L. Dawley for a permit to construct works in the River St. Lawrence near Long Sault island was refused.

GRAND FALLS POWER COMPANY, LIMITED, RIVER ST. JOHN.

By Order in Council, dated May 9, 1907, a copy of which is appended and marked A, the application of the Grand Falls Power Company, Limited, for permission to construct hydraulic works on the River St. John was referred to our Commission. The United States section, having doubt as to its jurisdiction over the question, have requested instructions from the Secretary of War, before proceeding to consider the subject-matter of this reference.

POWER WORKS ON THE ST. LAWRENCE RIVER AT OR NEAR BARNHART ISLAND.

A Bill was introduced into Congress, but not passed, at its last session, to authorize construction, maintenance, operation and use of dams, canals, reservoirs, &c., in or across the St. Lawrence river, in the State of New York, or so much thereof as lies within the jurisdiction of the United States, and in and across the lands adjacent to the said river, at such point or points, upon or adjacent to the south shore of the said river, near Long Sault and Barnhart islands, and upon the said islands and between the said islands, or either of them, and the shores of said river and Sheek island (but not across the international boundary line, unless consented to by the Dominion of Canada), subject to the approval of the Secretary of War of the United States. A copy of the said Act is appended and marked B. It will be seen that Section 4 provides :—

'That the consent of the proper authorities of the Dominion of Canada should be obtained before the work herein authorized is commenced.'

The Long Sault Development Company was incorporated by the State of New York on May 23, 1907, for the purpose of proceeding with these works. A Canadian company, known as the St. Lawrence Power Compay, has been formed to act in conjunction with the United States company and both joined in an application to our Commission for approval of their plans. .

The St. Lawrence is not, at this point, navigable for vessels in general, but has been used, in passing down the river, by the Richelieu and Ontario Navigation Company's steamers continually and by small pleasure boats and for the transport of timber rafts. The passage up is by way of the Cornwall canal. The proposed works involve the construction of dams across South channel (south of Long Sault island) across the main channel between Long Sault and Barnhart islands and across the east end of Little river between the north side of Barnhart island and the Cornwall canal. In

addition to these dams it is proposed to move lock 21, Cornwall canal, from its present position to the vicinity of lock 20, to deepen and improve Little river and to construct a lock in South channel.

The Commission have adopted the principle that no development would be permitted by the diversion of boundary waters for power purposes to the injury of navigation interests, but, where such developments are possible without interference with the interests of navigation, then they should be permitted, and, as far as practicable, in such a way that each country would be equally benefitted.

The matter was brought before the Commission at a meeting in Toronto when representatives of both power companies and their experts were present and explained the proposal. They urged that a large development of 50,000 horse-power and over could be obtained by the improvement suggested, and their experts contended that, instead of being an impediment to navigation, the proposed changes would much improve the conditions in that regard. The issues involved were, in our opinion, of a most serious character, and the Canadian section decided to call a special meeting in Montreal at which a public hearing would be given to all parties interested.

That meeting was held on November 6, in the Board of Trade rooms. The minutes of the meeting will be found in appendix C. Since that meeting, protests have been received against the allowance of the proposed works from the council of the Montreal Board of Trade, who urged among other things :—

'That in the case of a mighty river like the St. Lawrence, it is difficult, if not impossible for engineers to forecast the actual effect of entirely damming its swift flowing waters, and that there is a general conviction among the riverside population above Cornwall that the proposed works would cause such an overflow into the surrounding country as would involve damage to the extent of many millions of dollars, and your memorialists believe that they would also render useless some existing water powers in that vicinity.

'That the proposed damming of the river channels would, of course, prevent all boats from shooting the Long Sault rapids, the finest rapids in the river, and that the delay which the passage through the canal would cause, would render it impossible for boats to travel through the Thousand islands by daylight and reach Montreal the same evening, and thus two of the chief attractions for passenger travel on the St. Lawrence trip would not be available, with the result that the country would lose the large tourist traffic which is a source of profit to the river steamers and to the places visited.

'That while the promoters of the scheme claim that the interests of commercial navigation would not suffer were it adopted, as cargo boats do not run the rapids, the rafting business seems to have been ignored in this connection.

'That it is estimated that the rafts which pass down the river in each season contain over 300 cribs of timber, and that, were these cribs forced to pass through a canal instead of shooting the rapids, much time would be lost, and they would, moreover, by blocking the canal, seriously interfere with other traffic.'

The Shipping Federation of Canada also object on the following, among other grounds:—

'1. That said dams would completely block the river so far as navigation is concerned and necessitate the vessels and rafts that use the river being diverted to the already congested canal, thereby seriously interfering with the present conditions of navigation.

'2. That any scheme that would place the control of the waters of the St. Lawrence river in the hands of private corporations would, in the opinion of this federation, be giving away a national heritage. At present there is, at times, congestion in our canals, and to transfer the passenger boats and the rafts, would further increase the present delays that take place in getting the freight to the ports of Montreal, Quebec, Three Rivers and other ports in the lower St. Lawrence.

'3. That the canal and river system, we hold, should not be interfered with even in the slightest degree. We have 72½ miles of canals, extending from (but not taking in) Sault Ste. Marie, by the Welland to the St. Lawrence, on which the government have expended eighty millions of dollars, and the total tonnage passing through these canals in 1903 amounted to over 1,600,000 tons, showing the magnitude of the commerce which is now using the canals and seeking Montreal as an export point.'

The Dominion Marine Association also protest upon the ground that:

'The said proposals include the construcion of dams across the St. Lawrence river from the south shore to the foot of Long Sault island, from the said island to Barnhart island, and from that island to the Canadian shore, which dams will completely block the river, so far as navigation is concerned, and will necessitate passage up and down streams in all eases by way of locks.

'Vessels now enjoy the right of free navigation down stream in the channel north of Long Sault island, and South channel is also used for transportation down stream of rafts of timber of great value.

'The enforced lockage of these vessels and rafts and the enforced construction of the rafts in sections of suitable size for lockage, as well as the delays to be suffered during the period of eontruction of the proposed works, would very prejudicially affect not only the immediate interests involved, but also all other vessels which have to share the facilities for lockage.

'If the proposed works are built, the breaking of a dam or disabling of one or more locks, might completely bar all navigation for a considerable time, eut off the passage of rafts, and prevent even light vessels and barges from carrying the produce of the west down stream in the free channels, as has been done in the past.

The St. Lawrence channels in question are part of the great natural highway from the Great Lakes to the sea, and it appears contrary to reason to oppose any obstacles or barriers whatever in the way of their free navigation, and utterly preposterous to subject these navigable waters, the heritage of the people, to the direct or indirect control of private or foreign corporations.'

And conclude by resolution, as follows:—

'That the said proposals, apart altogether from any engineering problems involved or any question of water levels or depths, are prejudicial to navigation interests.

'That no additional or improved locks at this point, of the character so far suggested, can compensate for the disadvantages, temporary as well as permanent, entailed in the scheme, to justify in the slightest the proposed interference with the free channels.

'That the Dominion Marine Association be placed on record as protesting absolutely against the proposed works.'

The Richelieu and Ontario Navigation Company and the Calvin Company, Limited, have also filed objections.

On the other hand, we have a demand for the use of this water, for the development of electrical energy, which undoubtedly would be a material benefit both to Canadian and United States interests within a reasonable distance of the proposed works. The real issue is: What would be the effect upon navigation interests? It is conceded that these interests are paramount and must not be injuriously affected. Your Commission are not yet in possession of sufficient data to form an opinion on the matter, but are making every effort to obtain the same. Independent expert advice is being sought. The matter will not be dealt with hastily, but is of such vital importance that your Commission would be glad of any information that would assist them in arriving at a wise and proper conclusion.

RAINY RIVER IMPROVEMENT.

By Order in Council dated May 6, 1907, reference was made to our Commission of this matter, as follows:—

'On a memorandum dated May 2, 1907, from the Acting Minister of Public Works, stating that, in order to improve the navigation of Rainy river, a navigable stream forming part of the boundary between the Province of Ontario and the State of Minnesota, in which the existence of two rapids renders the navigation difficult and dangerous, the Chief Engineer of the Department of Public Works was requested to cause an examination and report to be made. In this report Mr. J. W. Fraser strongly recommends the construction of a dam at the foot of Long Sault rapids, a section of which will abut on United States territory. This dam, built of timber, would raise the water to a sufficient height to obliterate both the Manitou and Long Sault rapids, which interrupt the navigation of the river about the middle of its course.

'The minister further states that Parliament at its last session provided an amount of $50,000 towards the commencement of this work.

'The minister, in view of Rainy river being an international stream, recommends that before any action is taken the question of its improvement be submitted to the International Waterways Commission for consideration and report.

'The Committee submit the same for approval.'

The United States section, having doubt as to their jurisdiction, have asked their government for further instructions. In the meantime, as the matter was pressing, and with their concurrence, our section have reported as follows:—

'1. Rainy river is an international waterway connecting the lake of the same name with the Lake of the Woods, and is 85 miles in length. The stream between the Lake of the Woods and the foot of the Long Sault rapids, a distance of 40 miles, is, or can readily be made, navigable for boats of 6 to 7 feet draught for the full season of navigation, being controlled by a dam at Kenora; but its further use, during the low-water period, is prevented by the Long Sault and Manitou rapids, which lie approximately mid-way between the Lake of the Woods and Fort Francis; the Long Sault are 1½ miles in length and have a total rise (at extreme low water) of 7½ feet; the Manitou are located 6½ miles farther up, and are about 200 feet in length, having a total rise of 2·0 feet. Between these two obstructions there is a rise of 1·9 feet, and between the head of the Manitou and the foot of the Fort Francis rapids, a distance of 36 miles, the rise is 14·4 feet; making a total ascent in the 44·5 miles of river to be improved of 25·5 feet at extreme low water. The banks of the river along the reach under consideration are generally steep and from 28 to 40 feet high, so that the flood waters overrun but very few acres.

'2. The proposition contemplates the erection of a dam at the foot of the Long Sault rapids capable of raising the water 11 feet above extreme low water and flooding out both rapids. In connection with the dam is to be a lock (approximately 55 by 200 feet in size) for the passage of vessels. Because this dam must cross into United States territory, the International Waterways Commission have been asked to consider and report upon the improvement.

'3. We have examined the records of the Department of Public Works of Canada pertaining to this project, and find there maps and other data, obtained from actual surveys, which verify the figures and description given above.

'4. The effect of backwater during the low-water stage cannot be accurately determined from the meagre data at hand, but an approximation would seem to limit its effect to a point 5 miles above Manitou rapids. The effect of backwater at high water is hardly determinable in the absence of gauge records at Fort Francis during floods, but it is not believed that it can be seriously detrimental. The new low-water level in the reach between Manitou and Long Sault rapids will be, at most, four feet higher than at present and will, therefore, cause no flooding of the shores.

'5. Whilst at present, during the freshets, the water rises 16 feet above extreme low water, it appears certain that, under new conditions with proper controlling dams both above Fort Francis and at the new dam, and the increased cross-sections in the vicinity of the two lower rapids, the new flood level need be very little above the new low water. Such a control will improve navigation and maintain nearly constant the water-power head at Fort Francis and Couchiching. It is taken for granted that the design of the dam and lock will be such as to permit the passage of vessels at all times, whether the river is in flood or not; otherwise the highest interests of navigation would not be subserved.

'6. After considering the project, no objection can be seen to the proposed improvement; on the contrary, it has much to commend it.

'7. In this matter the members of the United States Section of the International Waterways Commission claim to have no jurisdiction, and this section therefore respectfully recommends that the Canadian government request the government of the United States to grant them permission to carry out the proposed works.'

REGULATION OF LAKE ERIE.

Ever since the formation of the commission we have been considering, from time to time, the question of erecting a dam or dams in the Niagara river, with a view to maintaining the level of Lake Erie. In theAct of Congress creating the United States section of this commission this reference is made to the matter:—

'The said commissioners shall report upon the advisability of locating a dam at the outlet of Lake Erie, with a view to determining whether such dam will benefit navigation, and if such a structure be deemed advisable, shall make recommendations to their respective governments looking to an agreement or treaty which shall provide for the construction of the same, and they shall make an estimate of the probable cost thereof.'

A large amount of labour has been expended upon the investigation of the problem. Several schemes have been proposed. The Commission have agreed that no works would be authorized, the effect of which would be to lower the levels in Lake Ontario or the St. Lawrence river. Of course, if some scheme can be devised which will improve navigation in Lake Erie without injury to other interests, it should be supported, but the whole matter will receive most careful consideration before any recommendation is made.

NIAGARA FALLS POWER DEVELOPMENT.

Owing to the very great public interest in this subject, it is perhaps desirable that we should repeat some of the matter contained in our previous reports.

Soon after the organization of our Commission, we found the members of the United States section anxious to deal with the subject of the preservation of Niagara falls. Action was, no doubt, forced upon them by public opinion generally, as well as by the personal views of President Roosevelt, as expressed in his message to Congress. The American Civic Association, having a very large membership scattered throughout the Union, was pledged to work together in order to preserve the scenic effect of the falls, 'in all their beauty and majesty.' While Canadian feeling had not been aroused upon the subject, it was certainly not desirable that we should put ourselves (if it could possibly be avoided) on record in opposition to this movement.

Up to the time that the agitation took voice and was emphasized by the President's message, corporation after corporation had obtained charters to divert water from the Niagara river, above the falls. The result, if all had gone into operation, undoubtedly would have been to completely destroy the scenic effect. Fortunately only two companies in New York state and three on our side of the river had actually constructed works. In New York state the Niagara Falls Hydraulic and Manufacturing Company and the Niagara Falls Power Company had works in course of con-

struction requiring about 18,100 cubic feet per second. On the Canadian side the Queen Victoria Niagara Falls Park had entered into leases and agreements, ratified by the Ontario Legislature, with three companies :—

1. The Canadian Niagara Falls Power Company, 110,000 horse-power, requiring 8,600 cubic feet per second.

2. Ontario Power Company, 180,000 horse-power, requiring 11,700 cubic feet per second.

3. Electrical Development Company, 125,000 horse-power, requiring 10,750 cubic feet per second.

The Joint Commission had agreed, as one of the principles which should govern the use of boundary waters, that, where there could be temporary diversions without injury to the interests of navigation for the purpose of developing power, they should be allowed, so that each country, so far as was practical, would receive an equal benefit. Neither country has any right of property, but only a right of user, in these flowing waters. The paramount right to use the great water system, starting with Lake Superior and finding its way by the St. Lawrence to the sea, is for navigation purposes, but as temporary diversions are possible at Sault Ste. Marie, on the Niagara river, on the St. Lawrence river and elsewhere without injury to the interests of navigation, it is, of course, desirable that they should be permitted, and we think it is manifest that each country is entitled to an equal benefit therefrom.

From Niagara river, above the falls, for some distance, water could be diverted, on either side without any injury to the interests of navigation; in fact, such interests would not have been affected if all the water had been so removed and returned to the river again farther down, and before reaching the point where navigation became possible. The only objection, therefore, to such temporary diversion of water is the effect upon the scenic beauty of the falls. The diversion, on our side, being almost entirely below the crest of the rapids, has no appreciable effect upon the flow over the American falls, and as the flow of water over the Canadian or Horseshoe falls is seven times greater than that over the American, it was felt that we could be permitted to take a larger quantity than it was possible to take upon the United States side without injury. The citizens of the United States had also diverted 10,000 cubic feet of water per second at Chicago which in its natural course would have flown over Niagara, and this was taken into consideration.

It is manifest that some arrangement must be arrived at between the two countries with regard to the regulation and use of boundary waters, otherwise chaos will prevail. At Niagara, on each side of the river, charters had been granted under which water in unlimited quantities could have been taken at points farther up the river. On our side it was sought to use the Chippewa river to drain the waters of Niagara into a new outlet—a canal to be built to a point near St. David's. Another Canadian charter sought to divert the waters of Lake Erie to a point near Jordan. On the New York side there was no limitation to the water which could be taken under several charters.

All these proposed developments would affect, more or less seriously, the level of Lake Erie and all are objectionable on that account and wholly opposed to the principle adopted by the Commission. The direct diversion from Lake Erie to the Jordan river is especially objectionable. The diversion of 10,000 cubic feet per second would have a more serious effect upon the level of Lake Erie than the diversion from Lake Michigan, at Chicago, of a like amount. It would mean the reduction of the lake level by more than six inches.

It is needless to say that navigation interests of both countries would refuse to submit to such an injustice. Chicago sought to justify itself by the necessity of preserving the public health, and evidenced their good faith by the expenditure of about fifty million dollars upon the project. Here navigation interests would be very seriously affected merely for the purpose of a profit by the production of power.

The Joint Commission succeeded in agreeing upon the following conclusions:—

The Commission has made a thorough investigation of the conditions existing at Niagara falls, and the two sections have presented reports to their prospective governments setting forth these conditions to which attention is invited. The following views and recommendations are based upon a careful study of the facts and conditions set forth in these reports.

1. In the opinion of the Commission, it would be a sacrilege to destroy the scenic effect of Niagara falls.

2. While the Commission are not fully agreed as to the effect of diversions of water from Niagara falls, all are of the opinion that more than 36,000 cubic feet per second on the Canadian side of the Niagara river or on the Niagara peninsula, and 18,500 cubic feet per second on the United States side of the Niagara river, including diversions for power purposes on the Erie canal, cannot be diverted without injury to Niagara falls as a whole.

3. The Commission, therefore, recommend that such diversions, exclusive of water required for domestic uses or the service of locks in navigation canals, be limited on the Canadian side to 36,000 cubic feet per second, and on the United States side to 18,500 cubic feet per second (and in addition thereto a diversion for sanitary purposes not to exceed 10,000 cubic feet per second, be authorized for the Chicago drainage canal), and that a treaty or legislation be had limiting these diversions to the quantities mentioned.

4. The effect of the diversion of water by the Chicago drainage canal upon the general navigation interests of the Great Lakes system will be considered in a separate report.

5. The Canadian section, while assenting to the above conclusions, did so upon the understanding that in connection therewith should be expressed their view that any treaty or arrangement as to the preservation of Niagara falls should be limited to the term of twenty-one years, and should also establish the principles applicable to all diversions or uses of waters adjacent to the international boundary, and of all streams which flow across the boundary.

When the Park Commissioners with the full authority of the legislature entered into their agreements with the three companies, no one anticipated or, if they did anticipate, then foretold the consequences. The Park Commissioners were getting large rentals, and the general opinion undoubtedly was that it was desirable to have these industries established. It is only fair to say that their works are magnificent results of the highest engineering skill, and that all the companies have joined with the commissiners in the endeavour to preserve, as far as possible, the natural beauty of the park.

It, perhaps, would have been wise if development had been limited to the generation of electricity for distribution in Canada. In that case we would most likely have had only one corporation up to this time, and, moreover, would have had the Canadian market fully supplied. It was undoubtedly the intention, when these leases were made, that each of the companies would find a market in New York state for part of their power, and also that each of them would supply power in Canada. It is also evident from the agreements that it was contemplated that the companies would themselves build transmission lines and deliver power both in the State of New York and the Province of Ontario. The provision in each and all of the agreements was as follows:—

'The syndicate, whenever required, shall from the electricity or pneumatic power generated under this agreement, supply the same in Canada to the extent of any quantity not less than one-half the quantity generated, at prices not to exceed the prices charged to cities, towns and consumers in the United States, at similar distances from the Falls of Niagara, for equal amounts of power and for similar uses, and shall, whenever required by the Lieutenant Governor in Council, make a return of prices charged for such electricity or power, verified under oath by any

chief officer of the syndicate, and if any question in dispute arises, involving the non-supply or prices of electricity or power for consumption in Canada, the High Court of Justice of Ontario shall have jurisdiction to hear and determine the same and enforce the facilities to be given or the prices to be charged.'

The price, it will be seen, was to be fixed at the place of delivery, which, of ocurse, implied that the companies were to build transmission lines and deliver. These corporations did what was to be expected, with so little control over their operations. By dividing the territory to be supplied, they avoided competition with each other, and two of them, by the formation of allied companies in New York state to distribute the power there, sought to nullify the effect of the only provision designed to protect the Canadian consumer.

The Canadian Niagara Power Company arranged to deliver its power to an allied company, the Niagara Falls Power Company, which built a transmission line to Buffalo and distributes the power of both companies. This company has taken to itself the market of Niagara Falls, in New York State, and Buffalo.

The Ontario Power Company formed a subsidiary company in New York state, known as the Niagara Lockport and Ontario Company, and the latter company has built transmission lines in that state 200 miles in length with branches, at a cost of upwards of four million dollars. This corporation supplies Rochester, Syracuse, Utica and manufacturing towns along and within reach of their transmission lines, all in New York state. It actually entered into a contract (subject to its agreement with the Power Company) to supply all of its 180,000 horse-power to its subsidiary company and has not, until recently, made any serious effort to supply the Ontario market.

The Electrical Development Company has built a transmission line to Toronto, but it also seeks an outlet in New York state for its surplus power.

The plain meaning of the agreements with each company was that it was to be permitted to transmit part of its power to New York state, but was to reserve half of its supply for use in Canada, and was to deliver the same at prices similar to those charged in New York state. By transmitting in New York state, only through the medium of their allied companies, they made it impossible to require them to deliver in Ontario, at equal distances, at equal prices. As they delivered to their allied companies at Nagara falls, they were in a position to say to the Canadian consumer: 'If you require power, you must build your own transmission lines and come to Niagara falls for it.'

The situation is full of difficulties. The companies have spent over twenty million dollars on their works and must find markets. It was evidently the original intention of both the Ontario Power Company and the Canadian Niagara Company to practically ignore the Canadian market. Unless some action could be taken which would control the export, it seemed to the members of your Commission inevitable that all three companies would seek the more accessible and profitable market in New York state to the neglect of our own, and we urged in our former report that your government should protect the Canadian public by exercising your right to control and regulate the export of electrical energy.

By chapter 16, 6-7 Edward VII., statutes of Canada, and known as 'The Electricity and Fluid Exportation Act,' such control was taken. Sections 4 and 5 provide as follows:—

'4. Subject to any regulations of the Governor in Council in that behalf the Governor in Council may grant licenses upon such conditions as he thinks proper for the exportation of power or fluid where a right to export exists by lawful authority; and such license shall be revocable upon such notice to the licensee as the Governor in Council deems reasonable in each case.

'5. Any such license may provide that the quantity of power or fluid to be exported shall be limited to the surplus, after the licensee has supplied for distribution to customers for use in Canada power or fluid to the extent defined by such

license, at prices and in accordance with conditions, rules and regulations prescribed by the Governor in Council.

'2. Every such license shall be revocable at will, by the Governor in Council if the licensee refuses or neglects to comply with any of the conditions imposed with regard to the supply and distribution of power or fluid in Canada.'

It did seem to us that it was a fair solution of the problem to say to each of the companies, 'You must carry out the terms of your agreement in its spirit by taking care of the Canadian market at reasonable distances from Niagara falls and at reasonable prices, at all times, to the extent of at least one-half of the power generated. If you carry out your obligation in that regard, you will be allowed to export your surplus, but not otherwise.'

The control over one-half of the production would undoubtedly supply all the demands of our Canadian market for many years to come, and it would not be any great hardship upon the companies to compel them to jointly or severally build the necessary transmission lines to care for the same. While we think it should be a condition of the charters of all companies hereafter incorporated in Canada that the power generated should be distributed wholly in this country, that principle cannot with fairness be applied to these corporations at Niagara falls.

It is manifest that when they were permitted to develop 400,000 horse-power, a market must be found for much the greater portion, for the present at least, in New York state.

If the companies had themselves delivered power in New York state, the prices there at equal distance in equal quantities was to be the test as to what price was to be charged the Canadian consumer. As they have made that test impossible by delivering all their power at Niagara falls, the price which they should be allowed to charge in Canada must be fixed in some other way. It was undoubtedly intended to be limited. The public have no right to expect power cheaper than it can be delivered after allowing an adequate return to the companies upon their investment. The rate to be charged, therefore, should be under some form of government control and regulation.

The companies should be treated alike. Each of them entered into the same obligation with regard to our market, and each should be compelled to carry out the terms of its agreement. If that be done, the regulation of the exports will be simple, the surplus only be exported by each, after each had done its share towards satisfying this Canadian demand. Under this plan the public will receive just what it is entitled to, the supply of power at reasonable prices, and no injustice will be done to any of the companies. It would be monstrous if all but 40,000 or 50,000 horse-power of the total 400,000 development should find a market in New York state. The public in Western Ontario are thoroughly aroused against this threatened injustice. .

Under the provisions of 'The Electrical Exportation Act,' the companies of Niagara falls are compelled to take out temporary licenses under regulations, a copy of which is appended and marked 'D,' and so control is kept over their export, and they have notice that they must recognize their obligations to our market.

The Ontario Power Company is now extending its lines to St. Catharines, and, it is understood, both it and the Canadian Niagara are now offering power to the Hydro Commission.

The Legislature of Ontario at its last session passed 'An Act to Provide for the Transmission of Electrical Power to Municipalities,' Statutes of Ontario, 1907, page 169. Section 8 provides as follows: —

'The Lieutenant Governor in Council, upon the report of the Commission recommending the same, may authorize the Commission:

'(*a*) To acquire by purchase, lease or otherwise, or without the consent of the owners thereof or persons interested therein to enter upon, take and use the lands, waters, water privileges, water-powers, works, machinery and plant of any corpora-

tion or persons owning, holding under lease or otherwise or developing, operating or using the same for generating or adapted for generating electrical power or energy or for the transmission thereof in Ontario; and to develop and use the same for any of the purposes of this Act.

'(*b*) To construct, maintain and operate and to acquire by purchase, lease or otherwise, or without the consent of the owners thereof or persons interested therein to enter upon, take and use, all erections, machinery, plant, and other works and appliances for the transmission and supply of electrical power and energy, and to conduct, store, transmit and supply electrical power or energy for the purposes of this Act and with lines of wires, poles, conduits, motors or other conductors or devices to receive, conduct, convey, transmit, distribute, supply or furnish such electrical power or energy to or from any corporation or person at any place through, over, under, along or across any lands, public highway, bridge, viaduct, railway, waters or watercourse, and through, over or under the lands of any corporation or person, and to enter upon any lands upon either sides of such lines or conduits and fell or remove any tree or limb thereof, or obstruction, which in the opinion of the commission, it is necessary to fell or remove.

'(*c*) To contract with any corporation or person generating, transmitting, or distributing electrical power or energy or proposing so to do, to supply electrical power or energy to the commission; and to require any corporation or person generating, transmitting or distributing electrical power or energy to supply so much thereof as the commission may require.'

It is proposed, under the provisions of this Act, that the commission shall build or acquire transmission lines from Niagara falls for the purpose of supplying power to the various municipalities, capable of being served from that point, and various municipalities interested have, by their votes recently taken, signified their desire to enter into agreements with the commission to that end.

It will be unfortunate if, with the same object in view, the protection of the public interest, the policies adopted at Ottawa and Toronto should work apart. It is not for our Commission to say whether private ownership with government control or municipal ownership should prevail with regard to the distribution of power from Niagara falls. We say that it is the duty of the companies to distribute at reasonable distances and at reasonable prices, and that they should be compelled to do so in equal proportions, so that the control over the export of each may be maintained by our government. If, however, the municipalities of Western Ontario elect to assume the burden of distributing, in the hope of thereby securing cheaper power, it does seem to us to be a most desirable essential in the working out of that plan that they should take over all the distribution and should acquire their power at Niagara falls, not from one company, but proportionately from each, so that the control over the export of each can be maintained.

It is manifest that if the Hydro Commission take all their power from one company, the Ontario Power Company, as proposed, they will come into active competition with the Electrical Development Company, the only company which has made a real attempt to supply our market, and they will, at the same time, relieve the other two companies from any obligation towards that market. By assuming the responsibility of the distribution, they practically do away with the provision in the agreement by which the companies are required themselves to distribute in Canada.

Duplicate lines would be wasteful and undesirable. If the Hydro Commission distribute, therefore, the companies cannot be expected to do so in competition. It follows also that if the Hydro Commission take all their power at Niagara falls from one company, the others must be permitted to export all, or nearly all, and the inevitable result must be to make your Act with regard to the exportation of power unworkable.

If a policy be adopted which enforces the obligation, at all times, of each of the companies to our market, each of the companies will make their American contracts subject to conditions which will enable them to supply, from time to time, the

increasing Canadian demand. If, however, any of them are excused from its present obligation to our market, it will be much more difficult later on to enforce its obligation to it. Contracts will have been made in New York state, and vested interests created which will complicate the situation.

Your Commission respectfully submit that each of the companies should be compelled to supply the Canadian demand proportionately, and only be allowed to export its surplus. Their obligation is to distribute power at reasonable distances and at reasonable prices. If they are relieved of the obligation to so distribute, they should not be relieved of the obligation to proportionately supply the power at Niagara falls and at fair prices.

If the principle of proportionate supply to the Canadian market be maintained, your government could control the export, and so insure at all times an ample supply for our use. This policy would be quite consistent with the terms of the agreements, not to do injustice to any of the companies, and yet fully conserve the public interest.

If we should ever require more than 200,000 horse-power (half of the production, we can safely leave, until then, the adjustment of that difficulty. In the meantime an aditional supply may be made available by the use of the water below the falls.

All of which is respectfully submitted.

GEO. C. GIBBONS,
Chairman, Canadian Section.

LOUIS COSTE.
Member, Canadian Section.

WM. J. STEWART,
Member, Canadian Section.

APPENDIX A.

EXTRACT FROM A REPORT OF THE COMMITTEE OF THE PRIVY COUNCIL, APPROVED BY THE GOVERNOR GENERAL ON MAY 9, 1907.

On a memorandum, dated May 7, 1907, from the Acting Minister of Public Works, submitting that the Grand Falls Power Company (Limited) was chartered by an Act of the Provincial Government of New Brunswick (5 Edward VII., in 1905), the company subsequently applying to the Governor General in Council on January 5, 1906, for permission to construct hydraulic works on the River St. John.

To this application, however, strong protests were opposed:

Firstly: By the Madawaska Log Driving Company and the St. John River Log Driving Company, largely interested in the navigation of that stream at that special point and largely controlling the log driving operations on the river. The objections of the said log driving companies are given in detail more particularly in paragraph 3 of Mr. Resident Engineer Shewen's report and in the different documents attached hereto, and from which copies it will also be seen that an agreement was finally arrived at between the said log driving corporations and the Grand Falls Power Company.

The Canadian Pacific Railway Company also objected to the granting of the permission sought for by the applicants, for the reason that the raising of the water near their bridge at that place will render the repairs to that structure very difficult and much more expensive.

Lastly: The Grand Falls Water Power and Boom Company, incorporated by Chapter 77 of the Acts of the Dominion of Canada, passed on the 22nd of July, 1895, claim that they have acquired lands, mill privileges, water-power, right of flowage, &c., and that the construction of the works proposed by the Grand Falls Power Company (Limited) will practically destroy their privileges.

The River St. John being a boundary stream, works affecting its navigation are of international importance, and for that reason would come more properly under the jurisdiction of the International Deep Waterways Commission.

The Minister, therefore, recommends that authority be given to refer the application of the Grand Falls Power Company (Limited) and of the protests lodged against such application, to the International Deep Waterways Commission for their examination and report.

The Committee submit the same for approval.

F. K. BENNETTS,
Assistant Clerk of the Privy Council.

The Honourable the Minister of Public Works.

APPENDIX B.

A Bill to authorize the construction of Dams, Canals, Power Stations and Locks for the Improvement of Navigation and Development of Water Power on the St. Lawrence river at or near Long Sault island, St. Lawrence county, New York.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that Michael H. Flaherty, Fred. J. Hyde, Henry H. Warren, Walter F. Wilson and John C. Crapser, their successors and assigns, may hereafter erect, construct, maintain, operate and use a dam or dams, canal or canals, reservoir or reservoirs, gates, sluices, trunks, pipes, bulkheads, piers, flumes, abutments and other works appurtenant thereto, and a bridge upon or in connection with said works, in or across the St. Lawrence river, in the State of New York, or so much thereof as lies within the jurisdiction of the United States, and in and across the lands adjacent to said river, at such point or points upon or adjacent to the south shore of said river, near Long Sault island, or Barnhart island, and upon the said islands, and between said islands or either of them and the shores of said river and Sheek island (but not across the international boundary line unless consented to by the Dominion of Canada), as the said Michael H. Flaherty, Fred. J. Hyde, Henry H. Warren, Walter F. Wilson and John C. Crapser, their successors and assigns, may elect and the Secretary of War may approve, and also in and upon so much of the said river and the bed thereof as lies south of the international boundary line, independently or in connection with like works now erected or to be erected in so much of said river and the bed thereof as lies to the north or Canadian side of said international boundary line, and upon and adjacent to the northerly shore of said river, and said Michael H. Flaherty, Fred. J. Hyde, Henry H. Warren, Walter F. Wilson and John C. Crapser, their successors and assigns, may erect, construct, maintain, operate and use power stations on or in connection with the said works, with all suitable structures, machinery and other accessories for the development of water power and the generation, use and transmission therefrom of the electric energy and power to be derived from said St. Lawrence river, subject to all and singular the conditions and provisions of an Act entitled 'An Act to regulate the construction of dams across navigable waters,' approved June 21, 1906, excepting that the actual construction of the works herein authorized shall be commenced within one year and completed within ten years from the date of approval hereof;

Provided, That the said above-named persons, their successors or assigns, shall, coincidently with the construction of the said works, build at locations approved by the Secretary of War a lock or locks with its or their appurtenances, said lock or locks to be of such kind and size and to have such appurtenances and equipment as shall conveniently and safely accommodate all the present and prospective commerce of the St. Lawrence river;

Provided further, That the said works and their appurtenances shall be so designed, located, constructed, maintained, operated and used, and the said lock or locks, with its or their appurtenances, shall be so designed, located constructed, equipped and maintained as to permit at all times during the season of navigation and at any stage of water the safe and convenient navigation of steamboats and other vessels and of rafts and barges through all that portion of the St. Lawrence river affected by said works;

Provided further, That detailed plans for the construction and operation of the said lock or locks shall be submitted to and approved by the Secretary of War before the commencement of construction of any portion thereof, and the said lock or locks shall be constructed under the supervision of some engineer officer of the army designated for that purpose, and that after the approval of the plans therefor no deviation therefrom shall be made without the prior approval of the Secretary of War of any such deviation;

Provided further, That compensation shall be made by the said above-named persons, their successors or assigns to all persons, firms or corporations whose lands or other property may be taken, overflowed or otherwise damaged by the construction, maintenance or operation of the said works, in accordance with the laws of the State of New York, but the United States shall not be held to have incurred any liability for such damages by the passage of this Act;

Provided further, That when said dam or dams and lock or locks and appurtenant works shall have been completed to the satisfaction of the Secretary of War, the said above-named persons, their successors or assigns, as the case may be, shall* convey to the United States, free of cost, title to all such lands as may be required for the construction and operation of said lock or locks or approaches thereto, and shall grant to the United States free use of all such water power as may be necessary for operating such lock or locks;

Provided further, That the United States shall at all times have the right to control the use of the said dam or dams and the level of the pool or pools formed thereby to such an extent as may be necessary to provide proper facilities for navigation.

Section 2. That the withdrawal of water from the St. Lawrence river and the discharge of water into the said river for the purpose of operating the said power stations and appurtenant works shall at no time be such as to impede or interfere with the safe and convenient navigation of the said river by means of steamboats or other vessels or by rafts or barges;

Provided, That said above-named persons their successors or assigns, shall construct such suitable fishways as may be required from time to time by the Secretary of Commerce and Labour.

Section 3. That except as provided for below in this section, said above-named persons, their successors or assigns, shall bear the entire cost of locating, erecting, constructing, maintaining and operating the structures and appurtenances provided for in this Act.

Provided, That the United States shall bear the cost of the supervision of the work by an engineer officer of the army, as provided for in section 1 of this Act, and also the cost of maintaining and operating the lock or locks, with their appurtenances, after their completion and due acceptance by the Secretary of War;

Provided further, That the said above-named persons, their successors or assigns, shall provide, in connection with such lock or locks and appurtenances, sufficient and suitable power for operating the same, as provided in section 1 of this Act, according to plans and specifications submitted to and approved by the Secretary of War.

Section 4. ** That the right to alter, amend or repeal this Act is hereby expressly reserved.

NOTE.—The Chief of Engineers, United States army, under date of February 23, 1907, recommended to the Rivers and Harbours Committee that section 1 be amended at the point marked* by inserting the following :—

*'turn the said lock or locks over to the United States ready for use and free of all expense, and said structures shall be and remain the sole and exclusive property of the United States, and the said persons, their successors or assigns, shall also'—

Also that section 4 be numbered 5, and a new section 4 be inserted as follows:—

**'Section 4. That the consent of the proper authorities of the Dominion of Canada shall be obtained before the work herein authorized is commenced.'

APPENDIX C.

INTERNATIONAL WATERWAYS COMMISSION

MEETING OF CANADIAN SECTION

PROCEEDINGS OF PUBLIC HEARING.

ST. LAWRENCE POWER COMPANY AND LONG SAULT DEVELOPMENT COMPANY.

MONTREAL, WEDNESDAY, NOV. 6, 1907.

The Canadian Section of the Commission met in the Council Chamber of the Board of Trade at 10 a.m.

PRESENT—George C. Gibbons, Esq., K.C., Chairman; Mr. Coste, Mr. Stewart, Secretary Coté.

Deputations were present from the Shipping Federation of Canada, the Montreal Board of Trade, the Town of Cornwall, and representatives of the St. Lawrence Power Company and the Long Sault Development Company.

The CHAIRMAN.—Gentlemen, the International Waterways Commission, the Canadian Section of which is here to-day, have had an application for a very important undertaking in the St. Lawrence river—the development of power by two companies, the United States company being known as the Long Sault Development Company, and the Canadian Company as the St. Lawrence Power Company—near Cornwall, Barnhart island and the Long Sault rapids. The general Commission on International Waterways have agreed upon certain principles governing these boundary waters. They have agreed that, in places such as the St. Lawrence river, Sault Ste. Marie and other boundary waters, where there is a stream partly in the territory of each country, if it be at all possible to make use of the water power without injury to the interests of navigation, that it should be permitted in such a way as to have the benefit distributed equally between the two countries as far as possible. The interests of navigation are to be in all cases paramount, and subject only to the right of use of the water for domestic purposes. That is to say, that where water is taken at Sault Ste. Marie, one-half of the power of the surplus water that can be taken without interfering with navigation should be reserved for the use of the Canadian people. That principle has been adopted by the general Commission. Now, this application comes before the International Waterways Commission, being an international matter, and has to be dealt with by both governments. Of course, it is the desire of the Commission, and in the public interest, that where power can be developed without injury to paramount rights of navigation it should be permitted; but if there be interference with those rights, of course it cannot be allowed. We had these gentlemen representing the Power Companies before us in Toronto, and it was thought desirable by the Canadian section, that the Montreal Board of Trade, so heavily interested in the navigation of the St. Lawrence, and other interests which might be affected, should have an opportunity of hearing from those, who are interested in this scheme, just what they propose, and that we should have the benefit of their opinion with regard to it, either now or later on. It is a large matter, not one in which I think it is desirable to act too hastily. The Commission want to get the very best assistance they can, expert or otherwise, and then to decide in advising the respective governments regarding this under-

taking in accordance with the principles which the commission has already adopted. I think perhaps it would be best now that we should call upon Mr. Foster to explain just what is proposed to be done by this company, and then we will hear in turn any other interests that are represented.

Mr. GEO. C. FOSTER.—As president of the St. Lawrence Power Company, I do not think it is necessary for me to say anything to you other than to furnish you with the explanations that our engineer will give in regard to what we propose to do. Suffice it to say that if our works as now contemplated are carried out, it will mean so far as Canada is concerned, the investment of a large sum of money and the development for commercial purposes of something that is to-day useless so far as those rapids at Cornwall are concerned. We do not expect from this Commission, or from anybody else, any unfair criticism; and we are quite prepared to put before you every detail and plan that we propose to adopt, because we are instructed by our engineer that not one dollar's worth of work that we anticipate doing is going to interfere with the paramount question of the navigation of the St. Lawrence either above or below Montreal. I am aware that during the last few days it has been stated here that the works which we contemplated at Cornwall are going to seriously interfere with the navigation of the St. Lawrence below Montreal; and I am going to admit to you frankly on the start, those of you who are shippers and interested in this question, that so far as our plans are concerned they not only do not contemplate such a thing, but that if it can be shown that they do, we do not expect anything but opposition from the Montreal Board of Trade and from the shippers who are interested in that route. And it is because I feel so confident that the position which our engineers have disclosed to us, is the true one, as well as the result that will follow from these works, that I tell you frankly we are prepared to put before you everything connected with it now and for the future. And if in the future the Board of Trade of Montreal or the shipping interests of Montreal have reason, or think they have reason, to fear seriously the result of the work we are doing at Cornwall, we shall at all times be prepared to put before you every detail connected with that work. I would ask our engineer to put the matter before you in a technical way.

J. W. RICKEY. Gentlemen, the general scheme as proposed by the St. Lawrence Power Company for the development of power at the Long Sault rapids is, briefly, the construction of two dams—one across the main channel of the St. Lawrence river and the other across the secondary channel of the St. Lawrence river. Through the main channel of the St. Lawrence, approximately, 96 per cent of the water passes, through the secondary channel, which is an international one, the other 4 per cent passes. The construction of these dams will throw approximately 50 per cent of the water into that international channel where now only 4 per cent goes. The scheme calls for the co-operation of both governments. Without such co-operation no power can be developed in the main channel of the St. Lawrence river, other than such power as is now developed by the St. Lawrence Power Company near the town of Milles Roches. The Long Sault Development Company, a United Ctates corporation, has a charter from New York state under which it may construct a power plant in South channel of the river, by which channel I mean the channel south of Long Sault island. This plant will be entirely in American waters, and would not interfere in any way with Canadian interests, any more than the present St. Lawrence Power Co.'s plant interferes with United States interests. (A map of the section was placed on the wall, and the various points referred to were indicated.) Ninety-six per cent of the water goes down through the South Sault, in United States territory, and the main channel north of Long Sault island. The 96 per cent then, having passed the international boundary line, passes entirely into United States territory on the south side of Barnhart island. The other 4 per cent passes through what is called Little river, which is the channel between Barnhart island and Sheek island until it gets to the east end of Sheek island. Then it joins the other 96 per cent.

The proposition of the St. Lawrence Power Company is to have a power house near the east end of Barnhart island in the present secondary channel of the river, that is, the Little river channel. This north end will abut against the Canadian shore, then extending westerly will join the V-shaped dam running westerly, and the other end of the dam will run southeasterly to the international boundary line. That much of the power house and dam is entirely in Canadian territory. The scheme further proposes to construct a new lock, about half a mile above present lock 20. This map was made to show that without the co-operation of United States interests no power could be developed from the Long Sault rapids, except the power that is available from the South channel. Let us assume this power-house and dam constructed as far as the international boundary line. All the water that is now going through the Long Sault rapids will continue passing down the present channel on the south of Barnhart island. The same amount of water which now goes through the Little River channel will continue there. That water, approximately 10,500 cubic feet per second, will come down as far as this V-shaped dam on the easterly end of Barnhart island, and would then pass through the gap between the boundary line and Barnhart island. That gap would be about 300 feet wide. That being the case, we have created no elevated pond. We have only the same amount of water that has been there in the past, and no power could be developed from this plant at all. I will now put up the other map, which shows the combined scheme. (Large second map is placed on wall.) This map is a tracing of the greater part of the former map, except that the proposed improvements on the south side of the international boundary line are here shown. All that is north of the international boundary line is just the same as it was on the other map. You will note a dam is proposed by the Long Sault Development Company extending from the north end of Barnhart island over to Long Sault island. Further, at the V-shaped dam at the easterly end of Barnhart island there is a second dam about 500 feet long running from the international boundary line and abutting on or against Barnhart island. Likewise, in South channel is shown the proposed power house of the Long Sault Development Company and the United States lock. This is the power house to which I referred when I stated that the Long Sault Development Company had a charter from the State of New York authorizing the construction of this dam under certain limitations. Now, let us assume that this power house and lock are constructed; that this upper dam is constructed; likewise the V-shaped dam, or the lower dam, is constructed; what will then be the result?—The water of the river above the Long Sault Development Company's power house and above these dams will then rise until it attains such a depth on the crest of the dams that all the water will pass over them, the power houses being assumed not in operation. That will mean the depth of the water on the crest of the dam will be approximately 5 feet, and we propose, subject to the permission of you gentlemen, to raise the level of the future pond five feet above the present level in the Cornwall canal on the north side of Sheek island. I referred a short time ago to the lock in Canadian territory at the east end of Sheek island, and about half a mile, roughly above lock 20. This lock, it is proposed to build entirely at the expense of the St. Lawrence Power Co., subject to approval, and if you please, the design of the Department of Railways and Canals. We propose, subject to your approval, to construct a channel along the lines or course of the present Little river, this channel to be approximately 800 feet wide. The velocity of the water in that channel will be about 3 feet per second, so that a boat having passed from Cornwall up the present Cornwall canal and through lock 20, thence going half a mile westerly, will pass through the new lock to be constructed at the St. Lawrence Power Company's expense. Then it can pass in almost a straight line, under full headway, up the river. The boats passing through the present channel, after clearing lock 20, follow the route that I will indicate with the pointer, through this tortuous channel, past the swing bridge, into the circuitous channel on the north side of Sheek island, then at the westerly end of Sheek island enter a narrow channel, and navigate it for a distance, approximating four miles, that is the upper end of the Cornwall canal, and through lock 21. I think it

will be plainly evident to all interested, that this channel between Barnhart and Sheek islands—this channel being anywhere from 30 to 40 feet deep and 800 feet wide—will offer a most excellent channel for navigation, where boats can come down under full headway to within a reasonable distance of the lock, when of course they have to slow down, as compared to the narrow channel on the north side of Sheik island and the Cornwall canal above and westerly from Sheik island. Now, coming to the United States side of the question, the United States government will insist on the construction of a lock joining the power house of the Long Sault Development Company at the foot of Long Sault island. This will be a single lift-lock, making the entire rise that is now accomplished by six locks in the Cornwall canal in a single lift. I have had some observations made on the time of passage required for boats through the present Cornwall canal. Just taking the boats at random, I put a man down there and told him to take every boat he could get on. I found that the shortest time was three hours and fifteen minutes and the longest was six hours and forty-five minutes. The time in passing through the lock was about 15 to 17 minutes roughly, which could be reduced a little below that.

There being six locks, 6 times 15 are 90 minutes, or an hour and a half, that is required for the passage of those boats simply through the canal. Having passed through the locks, as I understand the Canadian law, the legal limit is 4 miles per hour for the passage of boats in the canal. As a matter of fact, I think the shipping interests go considerably faster than that, but the legal limit is that. The main time spent is in passing through the lock slowly and leaving it slowly. The time after leaving the sluice gates is comparatively short; so that the United States lock should not require more than 20 or 25 minutes or half an hour. That means a saving of one hour on the downward trip, due to the United States lock. Having passed the United States lock, boats then enter the main channel of the St. Lawrence river, where the water, according to the United States government charts, is anywhere from 40 to 60 feet deep. This channel at its narrowest point will be over 1,000 feet wide, so that boats can pass each other at full speed. Now, the question may arise here, the current on the south side of Barnhart island is now very swift. No ordinary craft would care to come up against that. It is as swift as it is up near Farrans point. When we construct the upper dam that crosses the main channel of the river from Barnhart to Long Sault island, and also the V-shaped dam at the east end of Barnhart island, we will pass more than half the water in the river over the dam at the east end of Barnhart island. As a consequence of this, the water, instead of following the present main channel of the St. Lawrence river south of Barnhart island, about half of that water will be deflected—in fact a little more than half will be deflected—into the present channel of Little river, which it is proposed to enlarge and rectify, and also into the channel on the north of Sheik island. I will take up in just a moment how the water would get there under our proposed scheme. If we diminish the amount of water in this south channel that is entirely in United States territory by 50 per cent, we will decrease the velocity approximately 50 per cent. I have had current meter measurements made in this channel, and it is estimated that the velocity will be approximately 4 to 4½ miles per hour, which is considerably less than is obtained in many other stretches of the river. So that boats leaving Cornwall will have no difficulty in coming up the river through this channel and through the United States lock. However, I wish you to bear in mind that the integrity of the present Cornwall canal system is to be maintained. The boats, having such access, can pass up the Cornwall canal through the present lock 20, through the new lock which takes the place of lock 21; then if the captain should choose, he can go on the north side of Sheek island in the present Cornwall canal, or through the 800 foot international channel. It is proposed, with your permission, to remove the dam between the easterly end of Shiek island and the main shore that maintains the water in the present Cornwall canal at a higher elevation than the water in the main channel of the river immediately south of it. It is likewise proposed to remove the dam at the westerly end of Sheek island. The object in this is two-fold—in order to get 50 per cent of the total amount of the water in the

river down to the lower end of Barnhart island it is necessary to have very deep and very wide channels. Here is a channel that is already excavated, and by availing ourselves of that channel, by the removal of those two dams, the velocity of the water in what you might call the proposed Little river section will be exceedingly slow, so that boats will not have the slightest difficulty in coming against the current of about two miles per hour—three feet per second is what the figures call for.

Mr. Foster referred to the statement that seems to have gained ground to a greater or less extent, that the operations which we are proposing would diminish the volume of water in the St. Lawrence river at Montreal. Let us assume these dams built—the upper dam between Long Sault and Barnhart islands, and the lower dam as described previously. There is no pond or lake in which to store the water that is coming down the river. We have to pass it over those dams just exactly as it comes. If there were adverse winds that retard the water, then not so much water passes over the dams. If there are favourable winds coming down stream, then more water will pass over the dams. It seems almost axiomatic that simple obstructions placed across the river, as indicated here, with no storage pond to speak of, above the dams, that there can be no reservoir effect above there; consequently the normal flow of the river will obtain under the conditions proposed just the same as they do now. This fact seems so evident that I will not take up the time of you gentlemen to discuss it further, although if anyone wishes I would be very glad to enlarge on it.

There is one more consideration—the subject of frazile ice in the river. Generally speaking, the ice which forms the jams and ice bridges in the main river opposite Cornwall are caused by the Long Sault rapids. The water comes down at a temperature slightly below 32 degrees, due to the excessively cold weather. In passing over the rapids, the agitation that is there set up causes an immediate formation of those crystals of frazile ice. It is a long, narrow crystal—it is just like slush, like snow that is put in the water. This frazile ice, passing down the main channel, reaches Lake St. Francis. The velocity there is very much slower, and the ice lodges there. Then more, coming down, it just packs right in solid. We have observations showing that the rise of water in the river a short distance above Cornwall bridge in 1883, if I mistake not the date, I have a record of it in my book, rose practically 30 feet. In 1892, it rose 27 feet. I am informed by citizens of Cornwall that the winter floods caused by ice have reached up as far as Fifth street. It is also a well known fact that in the present plant of the St. Lawrence Power Company there is practically no trouble from frazile ice. The reason for that is, that this channel on the north side of Sheek island freezes over. The minute it freezes over, the ice floe protects the water from further reduction in temperature, and the velocity of the water being reduced the formation of frazile ice is prevented. Now, bearing these principles in mind— and it is no theory of mine, but it was very elaborately set forth by Dr. Barnes, of McGill University, who has written a very learned monograph on the subject, and any of you gentlemen who are interested in the subject of ice will find no better statement of the conditions than are set forth in that book— the construction of those dams will create a pond above the dams, so that the velocity of the water will be very materially reduced, due to the raising of the present surface of the water, the river channel being the same width. Consequently, the velocity being reduced, we will not have the turbulent water which now passes down the Long Sault, and the formation of frazile ice will thereby be prevented to a very great extent. It will not be entirely prevented, but to a very great extent. The same principle obtains in connection with the power house of the Long Sault Development Company, so that the great ice-making machine that is there now will be obliterated—and it means much to Cornwall interests.

It is proposed, subject to your approval, to remove the present dyke on the south side of the present Cornwall canal, west of Sheik island, the object being to get additional waterway on the north side of Long Sault island, which is now the main channel of the river, so as to reduce the velocity of the river in that channel as much as possible.

Coming now to the new lock which it is proposed to build above half a mile above lock 20. Northerly from this lock would be constructed a dyke approximately 100 feet wide on top. The function of this dyke will be to enable us to abandon this short circuitous length of canal between the enlarged Cornwall canal section and the present canal just above lock 20. The dykes of the present Cornwall canal are approximately 16 to 17 feet wide on top, and down here opposite Fletcher's hotel they restrain a head of roughly 30 feet. I have examined these dykes many times, and they are practically bottle-tight, with a head of 30 feet against them. We are proposing here to have a head of but five feet against that dyke, and a crest width of about 100 feet removing without any peradventure the possibility of a break occurring through them. In order to absolutely protect the interests in the Cornwall canal below lock 20, regulating works could be installed there to discharge the water from the canal down into the main channel of the river. Likewise provision can be made through the dyke, as indicated here, whereby the present amount of water that is supplied the water power interests at Cornwall could still be maintained. Or, if the government saw fit and chose to, more water could be supplied to those interests than is now the case.

Mr. MACAULEY.—May I ask one question. Will you please let us understand what is proposed at the foot of Barnhart island? You are proposing, apparently, to excavate two new channels, and what looks like a dam at the foot of that, which would mean a complete damming of the waters of the river. I see a new dam at the foot of that channel?

Mr. RICKEY.—That is the power house there.

Mr. MACAULEY.—Including a dam?

Mr. RICKEY.—The power house itself acts as a dam.

Mr. MACAULEY.—So that the result is three dams—the upper one, the one between locks 20 and 21 and this one at the end of that new channel; together with the other one at the end of South channel, which really completely bar the river?

Mr. RICKEY.—Absolutely. If we did not bar the river we could not develop any power. That is true.

Mr. MACAULEY.—One result of that will be no longer any such transit as is now made by the boats of the Richelieu & Ontario Navigation Company?

Mr. RICKEY.—No, sir, they cannot go down the rapids.

Mr. FOSTER.—There will be no rapids.

Mr. RICKEY.—I lived some years at Sault Ste. Marie, both Michigan and Ontario, and was struck with the large number of visitors that stopped there every summer just to see the passage of boats through the locks. They could visit the United States and then go to the Canadian side. Now, one of the chief features of the pleasure tours that are offered by the R. and O. Navigation Co. is the passage of the rapids in the river. Including the Long Sault rapids, there are four sets of rapids between the upper end of Barnhart island and Montreal. Our work here proposes absolutely obliterating the Long Sault rapids. On the contrary, the people coming on that pleasure trip will pass down through a lock that has a higher single lift than any lock that I know of on the American continent.

Mr. C. J. SMITH.—Will it be opened Sundays?

Mr. RICKEY.—Yes, sir, it will be open Sundays.

Mr. SMITH.—That is, the United States.

Mr. RICKEY.—The United States lock wil open on Sundays. Moreover, they will see a dam that will be second to none in the world—and I believe I am perfectly correct in that statement—there will be a depth of from two to five feet on the crest of the dam, falling 40 feet. That will be a sight that will be worth travelling many miles to see. Take the case of Niagara falls. The fear was entertained that the

so-called power enterprises there would interfere with the scenic beauty of the falls and diminish the amount of tourist travel there. On the contrary it has gradually increased, and the citizens of Niagara Falls, who were financially interested there before, are making more money now, I believe almost without exception, than they did formerly.

Mr. KING (Secretary Dominion Marine Association).—The point is new to me. I do not know whether it has occurred to my friend Mr. Smith, who is so interested in the R. & O. Co.? What provision is made for rafts?

Mr. RICKEY.—Rafts will go through this lock on the United States side.

Mr. KING.—What will be the size of the lock?

Mr. RICKEY.—That has not been determined, but it will be compatible with the entire Canadian system of locks.

Mr. KING.—But they do not now go through the locks.

Mr. RICKEY. I understand they do not, but that lock will be made wide enough to take care of the present traffic of the river, and any reasonable anticipation. The United States government will insist upon that.

Mr. KING.—Any reasonable raft.

Mr. RICKEY.—Any reasonable raft. You cannot make those rafts of exceedingly great width, because in passing through the various rapids they would be broken up. Now, the way the rafts come down the river at present is for a tug to bring them down to the upper end of Long Sault island. There they are broken up. The rafts are cast loose from the tug, and go down, trusting principally in providence. After arriving in the main channel of the river at the west end of Barnhart island they are again made up. Coming down in the proposed channel they would enter the lock on the United States side without being cut loose from the tug, and then on down the river. Now, we have had observations made as to the number of rafts and craft that have passed down the river in 1905 and 1906. From June 20, 1905, to October 20, 1905, there were seven trips of tugs accompanied by rafts; there were 21 pleasure boats. For the year 1906, from April 22 to November 23 inclusive, there were tugs accompanied by rafts, 17; tugs alone, 5; tug and scow, including one tug accompanied by a dredge 4; pleasure boats, 21.

Mr. KING.—You mean 21 separate boats or all of one name?

Mr. RICKEY.—No, there were 21 separate boats went down there.

Mr. KING.—In the season?

Mr. RICKEY.—Yes, this is South channel I am talking about. In the main channel, as I understand it, R. & O. Navigation Company steamers ply for about three months.

Mr. SMITH.—They ply longer than that; they ply the Long Sault rapids the season of navigation, whatever that may be, whatever we choose to make it. The Long Sault is a navigable stream, and not only Long Sault boats——

Mr. RICKEY.—Is it not a fact that the R. & O. boats are the only boats that go down?

Mr. SMITH.—Oh, no.

Mr. RICKEY.—How long is a season for the R. & O. boats to go down there?

Mr. SMITH.—We can run the Long Sault rapids the entire season of navigation.

Mr. RICKEY.—What is the number of months?

Mr. SMITH.—Roughly speaking, seven months. I do not say they always do. There is no trouble to run the Long Sault rapids at all.

The CHAIRMAN.—What amount of horse-power do you propose to develop on the Canadian side, and how much on the United States side?

Mr. RICKEY.—That is a subject that is under investigation at the present time.

The proposed power house on the Canadian side would have a capacity of approximately 50,000 horse-power. That power, gentlemen, is the same power as in the city of Minneapolis, a town of 300,000 people. It is more than the combined power of Lowell, Lawrence and Manchester put together. When we say 50,000 horse-power it does not convey much of an idea. It is like speaking of $10,000,000. It is when you come to analyze it that it means something which will supply all this adjacent territory up stream and at Cornwall for many years to come.

Mr. SMITH.—50,000 horse-power?

Mr. RICKEY.—Yes.

CHAIRMAN.—How much on the United States side?

Mr. RICKEY.—There have been no estimates made. I have men now gauging the river to determine the amount of water. Until we know the amount of water we can neither get the exact head under which the plants will operate, nor can we determine how much power will be available.

The CHAIRMAN.—It will be much larger though.

Mr. RICKEY.—Yes.

Mr. MACPHERSON.—How much are you going to raise the level in the neighbourhood of Barnhart island? Is it necessary to have any side dams to prevent the drowning of lands or the diversion of the river into other channels?

Mr. RICKEY.—As a general thing the banks are very steep, so that the overflow of land is comparatively little. I presume that later on a member of the Long Sault Development Company will state exactly what lands have been acquired by the United States Company, and also we can ascertain the amount of land that has been acquired by the St. Lawrence Power Company. Answering the question in a general way, the pond will be raised five feet above the present level of the Cornwall canal.

Mr. MACPHERSON.—Above the present level of the river?

Mr. RICKEY.—Above the present level of the river at the end of Barnhart island, about 40 feet.

Mr. MACPHERSON.—Head?

Mr. RICKEY.—40 foot head. I wish it to go on record that that is not exact. As I said a while ago, those computations are being made, and it involves a great deal of labour.

Mr. MACPHERSON.—Are any side dams required? Any dykes?

Mr. RICKEY.—Yes. There is a dyke here, and so marked on the map. There is a dyke adjoining the Canadian power house. That is the dyke to which I referred a while ago, that will be 100 feet wide on top, built under the specifications and approval of the Canadian Government.

Mr. MACPHERSON.—That is the only dyke?

Mr. RICKEY.—That is the only dyke.

Mr. MACPERSON.—On either side of the river?

Mr. RICKEY.—Yes.

Mr. W. B. MACAULEY.—There is a question occurs to me here. The various dams that are being put up, as I understand, will cause the chief, if not the entire body of water to come apparently into the Canadian channel. How much will that raise the water summer and winter.

Mr. RICKEY.—Approximately 40 feet above.

Mr. MACAULEY.—What is the rise in the winter of the water of the river down here. (power house)?

Mr. RICKEY.—I cannot answer that question exactly, in a general way; it is about 15 feet in the average winter.

Mr. MACAULEY.—My reason for asking that question is this—it did not occur to me before, but hearing the remarks made here—the difficulty of getting a supply, that is of using the canal water in winter, is owing to the frazile ice blocking up the fall of the canal water, and in that way preventing it being of use. Now, if this is to raise the water higher in winter, then we shall be compelled to utilize all winter the power from further up. What I mean is this. At the present time the supply of power by the St. Lawrence Company in the winter is entirely done away with during the time that the block water below, from the ice that accumulates there, prevents the frazile ice going away; and it raises the water so high as to be equally as high, or about as high as the water in the canal. The result is that we cannot use the water of the canal, and have to fall back upon the power that the St. Lawrence Company supplies. Now comes the question, will this raise the water during the whole winter, and in that way prevent our utilizing the water of the canal, and compelling those using the canal water to fall back upon the St. Lawrence Power Co. for power for the whole winter.

Mr. RICKEY.—In answer to that question, I will repeat the remarks which I made a short time ago relative to the formation of frazile ice opposite the town of Cornwall; the ice being formed in the Long Sault rapids dams up the water at and above Cornwall and backs up in the tail race of your mills, if you please. When these dams are constructed the formation of frazile ice will be very greatly diminished and the damming up, at the head of Lake St. Francis or in your tail race will be very much less, and you will have a very much better condition under this regime than you have now.

Mr. MACAULAY.—Why?

Mr. RICKEY.—Because it is the fazile ice that forms the ice dam down there and backs the water up your tail race. If we do not have the frazile ice the tail race water will not back up, and it is the backing up of the tail race water that diminishes the head in your plant.

Mr. DAVIS, (President of the Long Sault Development Co.,)—I think Mr. Macauley's conception is that the present tail race comes in at the proposed high level. The fact is the tail races of the various companies utilizing the power on that canal go in below not above those dams, so that whatever water goes in above those dams makes no difference.

Mr. E. O'CALLAGHAN (Cornwall).—The formation of this frazile ice is just opposite the town of Cornwall. When it freezes below Cornwall it has a different effect from above. You cannot guide the formation of this frazile ice except just as it is formed in the fall. Seasons differ.

Mr. COWIE.—What is the drop from Lake Ontario to the Sault Rapids?

Mr. MARCEAU.—I think it is a couple of feet.

Mr. COWIE.—Will not this back up Lake Ontario?

Mr. RICKEY.—The pond that we propose will back the water up to the head of Croil island. That being the case the current at present at Farran's point will be greatly diminished, which will be a decided benefit to navigation.

CHAIRMAN.—Will it affect the level farther than Farran's point?

Mr. RICKEY.—I cannot answer those questions directly. There are so many details that I cannot bear in mind.

CHAIRMAN.—Would that have an injurious effect?

Mr. RICKEY.—It would be an advantage if we could get the water down here at the low season. If we could back up Lake Ontario at the high water and get the water down here at the low water it would be an advantage to navigation?

Mr. STEWART.—The fall between Lake Ontario and the head of the Cornwall water is somewhere about 45 feet.

CHAIRMAN.—Are there any other questions, or does anybody else desire to address the Commission?

Mr. C. J. SMITH.—I would like to have the estimated cost of this plant—both development companies combined.

Mr. FOSTER.—As our engineer has already told you, we are not in a position to-day to say to this meeting, nor to our own associates, what the cost of this is going to be, and there may be some difference in the actual cost of it and the estimates we make of it; but the probability is that so far as the Canadian end of it is concerned it means an expenditure roughly in the neighbourhood of $5,000,000.

Mr. RICKEY.—That is the expenditure in Canadian territory.

Mr. FOSTER.—By the Canadian Company in Canadian territory, which is the only place where they are going to spend any money, and in the purchase of the lands which we have already acquired, and flowage rights, etc., which are in the neighbourhood of something like $100,000.

CHAIRMAN.—Are there any other questions, or does anybody desire to hear further from the promoters of this scheme?

Mr. MARCEAU.—I would like to correct a statement I made just now about the drop between Lake Ontario and this plant. When I said two feet I meant at the head of the rapids. This is considerably lower than the head of the rapids. I am not prepared to say what would be the fall from Lake Ontario to this point.

Mr. CAMPBELL.—The town of Cornwall is represented here by a delegation appointed at a meeting of the Board of Trade of Cornwall, which has 200 members, and this resolution was unanimously passed, and the delegation was sent down to support the scheme.

'Moved by N. J. Fraid, Vice President.

'Seconded by J. A. Macdougal.

'That whereas the Cornwall Board of Trade have learned that a meeting of the International Waterways Commission, Canadian Section, is to be held at the City of Montreal, on the sixth day of November, at 10 o'clock A.M., for the purpose of presenting before those interested in the navigation of the St. Lawrence, the proposal of the contemplated works of the St. Lawrence Power Company at the Long Sault rapids in the vicinity of the town of Cornwall.

'And whereas the Cornwall Board of Trade feel that the development of the water power at or near the town of Cornwall would be greatly in the interests of the town of Cornwall, county of Stormont, and the eastern portion of the province of Ontario.

'Therefore the Cornwall Board of Trade authorizes and empowers the following representatives from among their number to attend at said meeting and to advocate for and urge upon the Commission the importance of assisting in the development of power at or near Cornwall.

E. CAMPBELL,
President.

F. BISSETT,
Secretary Cornwall Board of Trade.

Mr. CAMPRELL.—Mr. Smith, a member of the Board of Trade, will speak on behalf of the Cornwall board.

Mr. ROBERT SMITH (Cornwall).—Mr. Chairman and gentleman, I do not know that I can add very much to what is already stated in the resolution; but I may say that the town council of Cornwall have passed, as I understand, the same resolution, and I think the Mayor is here. From the point of view of the town of Cornwall—which as you know is a somewhat large manufacturing town—the development of power is a very important question. As conditions prevail there now, we are deriving a certain amount of water power, for the running of the mills, directly from the Cornwall canal. Power is also developed for other purposes, such as street railway, electric lighting, &c. One of the difficulties that the owners of those powers have to contend with at the present time is the back water, that has been alluded to. That back water

rises to a very great height at times in Cornwall, sometimes as high as 50 feet. We have had the town flooded. Of course, when the back water comes up, there is no power, and those mills and other industries must have supplemental steam plants to run their factories during that time. Except that reasonable supplementary supply, the power has been obtained from the St. Lawrence Power Company, which in some places has taken the place of steam plants. The proposed scheme will greatly benefit the existing powers as I understand it, from an engineering point of view by reason of preventing this ice from going down and creating a dam. At all events it is represented by the engineers in a technical way that that ice dam at Cornwall will be prevented, and in that way the head of the present power developed at the canal will not be obstructed in winter, and the result will be that the power will be continual the year round. That is a very important consideration from that standpoint. Beyond that the power at Cornwall is limited. There is not, I understand, a single horse-power available in addition to what is now being used, even from the St. Lawrence Power Company. That is, they have already sold all the power that they can develop under present conditions.

Mr. CHAIRMAN.—About how much is that?

Mr. FOSTER.—1,250 horse-power.

Mr. ROBERT SMITH.—That places the town of Cornwall in a very awkward position. We are not in a position to offer any inducements in the way of power to any manufacturer coming to Cornwall. Therefore, any one can see the vast importance of any scheme that will develop 50,000 horse-power right in the neighbourhood of the town. We will then be in a position to offer inducements to industries coming to the town, which can only now develop power by means of steam.

The MAYOR OF CORNWALL said: It was understood by the council and the Board of Trade that Mr. Robert Smith, who has just spoken, would represent us.

The CHAIRMAN.—Are there any others to be heard in support of this proposal? Are there any who desire to say anything in general criticism, in opposition or otherwise?

Mr. MARCEAU.—I have been directed to come before the board on behalf of the Department of Railways and Canals, and I have written here a little statement:—

'The department has no particular opinion to express with regard to the proposed power project, in favour of it, at any rate, at the present time. But it is opposed to it as exposed through the press.

'No plans were submitted to this department to enable an intelligent opinion to be formed.

'In the absence of full working plans, showing exactly what is contemplated, the only action we can take is to object to the International Waterways Commission giving the proposed company any rights on the St. Lawrence and to oppose any interference with the river's regimen as established.

The CHAIRMAN.—Have you made this report to the minister?

Mr. MARCEAU.—No, I did not make this report; I was directed by the chief engineer to come before this meeting and impress that.

The CHAIRMAN.—I would like to hear everybody on this subject. In opening this meeting I forgot to mention and I mention it now for fear anybody would go away —that we want the representatives of the Montreal Board of Trade and all interested in navigation to remain with us either when we finish this morning, or this afternoon, to hear a still more important matter about which we propose to consult you—the proposed dam in the Niagara river. The principle there is the same. It is conceded that it must not be built if it will be injurious to navigation in the Lower St. Lawrence, but if it can be built so as to improve navigation without injury below, it should be done. But it is so important a matter that I mention it now so that no one who is interested in any way in navigation may go away. Are there any other repre-

sentatives of the Montreal Board of Trade who will address us on the subject of the power development in the St. Lawrence?

Mr. ESDALE.—As chairman of the navigation committee of the Board of Trade I heard with a great deal of interest the details of this scheme. The council of the Board of Trade associated with me in this matter James A. Tuttle, manager of the Montreal Transportation Company, who is better posted on the river, and I will ask him to speak. I would like to impress the fact that the board has always taken a strong stand that the government should not sanction any work in any way or shape on the river that would in any way interfere with the waterways for inland or oversea traffic. The government have already spent millions on our international waterways, and we feel very strongly that before anything should be done it should be gone into in the most thorough manner, so that there would be no danger of a fraction of the water being taken away from the waterways.

Mr. TUTTLE.—I feel a little embarrassed, because I am neither an engineer nor have I the technical knowledge necessary to address you on this subject. I think what Mr. Esdale says is the main point of the Board of Trade. They do not wish in any way to hamper any trade or the development of any scheme that will be for the improvement of the navigation of Canada. On the other hand if this be permitted to go through we may find that the St. Lawrence, east of Cornwall, is down some three or four inches. Now it is quite true that by damming this stream theoretically the same water will go over the top and the same depth of water will be below. I understand that it does not always occur. When these dams are put in a certain small amount of water gets drained off by canals in some way not accounted for, and the same amount of water does not run over, that ran in a free manner. The result is that the lowering of the water in Lake St. Louis or Lachine rapids, where we are forced to use 13 ft. 10 in. is going to affect navigation in a very serious manner—not only for river vessels, in which I am interested, but lake vessels, and all traffic coming through from the great lakes. The government have been good enough to give us a 14-foot channel, and we utilize it. Suppose it is reduced to 13 ft. 9 in. or 13 ft. 6 in., it is going to cut the vessel's load down, right down from Fort William or Duluth, as the case may be, to Montreal. I think the St. Lawrence Power Company—I am not trying to find particular fault with them—are not friendly to navigation. Rather, over every vessel passing through the canal, they hold, I think, one of the greatest menaces in Canada to-day. They have a contract with the government for 80 or 90 or 100 years by which they are obliged to pull every vessel in and out of each lock. This may not be the place to bring it up, but this is the company that holds the contract, and I think we should deal very carefully, and very slowly, and employ the most expert man that can be found, as no doubt yourselves and the government will do, before any permission is granted to this company. They are to-day making almost a tail race out of the Lachine canal from their own works to the head. What they are not doing the balance of the manufacturers along the canal are doing. You take lock 17 in that canal. I think the west weir there has diverted more vessels, caused more accidents, and caused the insurance companies more loss than probably any place outside of the entrance to Farrans point canal on the River St. Lawrence. As I understand it, these canals, and these channels that were dug were principally for navigation. they are not for water-power schemes; and the navigation should be protected. The scheme they have to-day of drawing vessels in and out of the Cornwall canal is delaying us at least from 10 to 12 hours to pass through that canal, where we should do it in 3, and it seems there is no means of getting quit of this for ninety years, when we will all be dead. (Laughter.) Now, I think we ought to go a little slow in granting any greater powers. If they dam up the south side opposite Farran's point there, as I understand it, it will force vessels that to-day use Farren's point canal, or rather, that have been using the slide, to go outside. It is going to increase the current there, and it will force vessels to go through the canal, all sizes.

SUPPLEMENTARY REPORT

OF THE

INTERNATIONAL WATERWAYS COMMISSION

1908

PRINTED BY ORDER OF PARLIAMENT

OTTAWA
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1908

[No. 19c—1908.]

TORONTO, ONTARIO, June 23, 1908.

To the Honourable the Secretary of State of the United States of America

and

The Honourable the Minister of Public Works of the Public Works of the Dominion of Canada.

The International Waterways Commission has the honour to submit the following report and preliminary estimate upon the work preseribed to it by artiele 4 of the Treaty of April 11, 1908, relating to the more complete definition and demareation of the international boundary between the United States and the Dominion of Canada.

1. The eommission has deeided that the series of charts be uniform in size.

That a seale of 1:20,000 be adopted for the delineation of the rivers and Pigeon bay; that the head of the St. Lawrenee river and foot of Lake Ontario, the east and west ends of Lake Erie, Lake St. Clair, False Detour passage and the east end of Lake Superior (Whitefish bay) be delineated on a seale of 1:60,000; that lakes Ontario, Erie, Huron and Superior be delineated on a scale of 1:300,000; and that the Niagara river from Lewiston to La Salle, and the St. Mary's river from Little Rapids to Point aux Pins, be also delineated on a larger scale of 1:10,000.

The standard size of these charts to be 40 by 50 inehes within the border.

Based upon the foregoing, there will be required:—

7	charts for the St. Lawrence river.
2	" " Lake Ontario.
2	" " Niagara river.
3	" " Lake Erie.
2	" " Detroit river.
1	chart " Lake St. Clair.
2	charts " the St. Clair river.
2	" " Lake Huron.
4	" " St. Mary's river.
3	" " Lake Superior.
1	chart on 1:10,000 for Niagara falls.
1	" " St. Mary's falls.
Total 30	

That these eharts be projeeted upon the new United States standard datum, and show substantially the following:—

The shore line of the lakes, rivers, islands and the mouths of the more important tributary streams; the location of all the principal eities and towns; the location of all lighthouses, and all permanent aids to navigation; and all of the hydrography available from the Canadian and United States surveys; all of the geographic positions upon which the projections are based; the boundary line, and all monuments, ranges, buoys, &c., used to mark it.

Our reasons for the foregoing recommendations are based upon a careful study of the lake survey charts. It was found that a series of charts based upon two scales, one for the lakes and one for the rivers, would not satisfy all of the conditions. Three

scales, namely, 20, 60 and 300 thousand, cover every feature of the boundary in a fairly satisfactory manner, with the possible exception of the immediate localities of Niagara falls and the St. Mary's falls. For these localities, where large power interests are located, we have adopted a chart for each on a scale of 1:10,000. It is possible that there may be other localities where, after further consideration, it may be advisable to delineate them on a scale of 1:10,000 also. It should be understood that these charts on this scale are to be extras; that is, they will cover areas that will be delineated on the smaller scale charts. It will be seen at a glance that this method would be much cheaper than to produce all of the river charts on a scale of 1:10,000.

One of the difficulties of producing all of the river charts on a scale of 1:10,000 is that in certain localities they would not show enough of the territory adjacent to the river to permit of showing permanent marks and ranges.

2. Having, as above, determined upon the most suitable scales for the proposed charts, there naturally follows the question of production, not only for delineating the boundary line, but for fulfilling the terms of the treaty by making four copies for the files of the two governments.

For the charts, the commission is of the opinion that the surveys of the United States lake survey can be safely taken, as they embrace all the United States shores and much of the Canadian, and that most of the missing portions of the latter can be filled in from the work of the Canadian hydrographic survey.

The majority of the charts of the United States lake survey now in use were constructed prior to the connection between its triangulation and that of the coast and geodetic survey, from which was derived the United States standard datum, and as a consequence these charts are not in accord with that datum.

In our opinion it would be quite improper for an international commission engaged in such an important work as the delineation of a boundary line, to offer the public of two countries any charts not drawn from the latest information available.

It therefore becomes necessary to construct new charts for the special purpose upon nearly uniform scales.

The charts called for may be produced in three ways:—

(*a*) By draughting on paper;
(*b*) By photolithography, and
(*c*) By engraving.

(*a*) *By draughting.*—In this method, the projection, reduction and drawing must be all carefully drawn on paper, and from the finished sheet, four separate copies would be taken singly and independently. This process would be very laborious and costly, and would leave infinite chances for inaccuracies, inconsistencies and omissions, to such an extent that it would be almost impossible to assert that any two copies were exactly alike. In addition, most of the accuracy obtained from redrawing would be sacrificed in the various necessary transfers.

(*b*) *By photolithography.*—In this method one copy must be most carefully and neatly drawn in every particular for the photographer. The commission does not feel that it would be justified in adopting this method, because of the distortion that usually accompanies the use of photography.

(*c*) *By engraving.*—There are two kinds of engraving usually practiced in the production of charts, that upon stone and that upon copper, the former being cheaper and more expeditious.

In this process the projection can be accurately drawn upon the stones, and the details of shore-line, hydrography, &c., placed directly there by reducing from the originals either by pantagraph or photography without any necessity for a finished drawing. The commission has adopted this method of reproduction, because upon the stone the chart can be drawn more accurately than upon paper, and from this *any number* of charts can be printed immediately, each one exactly like all the others.

In addition, if thought advisable, the charts can be preserved on these stones for all time; or they can be transferred to copper by the process now used by the lake survey, the copper plates preserved and the stones sold.

An approximate estimate of the chart work by this method would be $60,000.

3. Field work required for the preparation of charts:—

In the construction of charts for navigation purposes the two governments have been engaged for several years. The survey of the United States shores has been completed in conjunction with a primary triangulation that extends into Canada in many places. Of the Canadian shores, those of lakes Huron and Erie have been completed, while that of Lake Superior is partially done, and wherever possible, connection has been made with the triangulation of the United States lake survey, so that the two surveys may be taken as giving an accurate delineation of the outline of the lakes. for an accurate determination of the boundary line there remains to be surveyed the whole of the north shore of Lake Ontario from False Ducks to Port Dalhousie, a portion of Lake Superior in the vicinity of Otter Head, and a resurvey of Pigeon bay on a larger scale than has been used by the Canadian hydrographic survey.

4. Placing monuments, ranges, buoys, &c., to mark the boundary:—

The treaty calls upon the commission to mark the international boundary by monuments, ranges, buoys, &c., wherever possible. The cost of this work will depend upon the number and character of marks established, but a rough estimate would be $100,000, making an approximate total estimate for doing the work of $160,000.

A probable estimate for expenditures the first year is $15,000 for each government.

All of which is respectfully submitted.

GEO. C. GIBBONS,
Chairman, Canadian Section.

LOUIS COSTE,
Member, Canadian Section.

WM. J. STEWART,
Member, Canadian Section.

O. H. ERNST,
Brigadier General U.S. Army, Retired.
Chairman, American Section.

GEORGE CLINTON,
Member, American Section.

E. E. HASKELL,
Member, American Section.

Attests—

THOMAS COTE,
Secretary, Canadian Section.

W. EDWARD WILSON,
Secretary, American Section.

DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE FISCAL PERIOD FROM JULY 1, 1906,
TO MARCH 31, 1907

Submitted in accordance with the provisions of the Revised Statutes of Canada, Chapter 37, Section 28

PRINTED BY ORDER OF PARLIAMENT

OTTAWA
PRINTED BY S. E. DAWSON, PRINTER TO THE KING'S MOST EXCELLENT MAJESTY.
1907

[No 20—1908]

To His Excellency the Right Honourable Sir Albert Henry George, Earl Grey, Viscount Howick, Baron Grey of Howick, in the County of Northumberland, in the Peerage of the United Kingdom, and a Baronet; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, &c., &c., Governor General of Canada.

MAY IT PLEASE YOUR EXCELLENCY,—

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal period from July 1, 1906, to March 31, 1907.

GEO. P. GRAHAM,
Minister of Railways and Canals.

CONTENTS.

—	Part.	Page.
Report of the Deputy Minister of Railways and Canals	.....	ix
Statement of Accountant of Department	I	3
Report of the Chief Engineer, including Reports of General Manager of Government Railways and Superintendents of Canals	II	3
Railway Subsidies, Acts passed respecting	III	3
Miscellaneous Statements, including—		
Subsidy agreements for the construction of railways	IV	2
Contracts entered into	IV	4
Water power and other public property leased	IV	8
Property conveyed	IV	14
Damages released	IV	18
Report of the Government Chief Engineer for the Western Division of the National Transcontinental Railway	II	177

(For Index see End of Volume.)

MAPS

ACCOMPANYING REPORT OF THE DEPUTY MINISTER.

RAILWAY SYSTEM.

1. General map of the Dominion.
2. British Columbia and Alberta.
3. Manitoba and Assiniboia and part of Saskatchewan.
4. Ontario and Manitoba.
5. Ontario and Quebec.
6. Nova Scotia, New Brunswick, Prince Edward Island and part of Quebec.

CANAL SYSTEM.

7. Canadian Ship Canal, and also St. Mary's Falls Canal, Mich., U.S.A.
8. Line of Welland Canal between Lakes Erie and Ontario.
9. Trent Navigation and Murray Canal.
10. St. Lawrence, Ottawa, Rideau and Richelieu Canals.

REPORT OF THE DEPUTY MINISTER.

To the Honourable Geo. P. Graham,
Minister of Railways and Canals.

Sir,—I have the honour to submit the annual report of the Department of Railways and Canals for the fiscal period of nine months ended March 31, 1907. By the Act of 1906, chap. 12, 'An Act respecting the fiscal year,' it was enacted that, dating from July 1, 1906, the period from April 1 in one year to March 31 in the next year shall constitute the 'fiscal year,' the year 1906-07 to consist of nine months, only.

The annual reports of the engineers, together with general and special reports from superintendents, both of railways and canals, and from other officers in the department, are given in appendices.

In Part I. will be found statements showing the amounts expended during the past fiscal year in construction, repair and maintenance of the several works under the department; also statements showing total expenditure on each canal since its construction, and on each of the government railways; also a statement showing the payments made, year by year, to subsidized railways, with the aggregates of such payments.

GENERAL SUMMARY.

The expenditures of the department for the nine months ended on March 31, 1907, on its works of construction, operation and maintenance, both railway and canal, and in furtherance, by subsidy under authority of parliament, of outside railway enterprises, are as follows :—

The total railway expenditure for this period amounted to $14,918,598.92; of which $7,174,370.17 was charged to capital, $6,328,745.65 to revenue, and $1,415,483.10 to income.

The expenditure on capital included $5,537,867.50 for the National Transcontinental Railway.

The expenditure on income included the sum of $1,323,367.48 paid as subsidies to railways other than the government roads, also $68,664.29 for the Board of Railway Commissioners for Canada.

The expenditure on the Intercolonial Railway, including the Windsor branch, $15,425.32, charged against revenue, was $7,551,806.41, namely, on capital account $1,506,209.26, and on revenue account $6,045,597.15.

The expenditure on the Prince Edward Island Railway was $374,859.02, of which $91,710.52 was on capital and $283,148.50 on revenue account.

The expenditure on canals aggregates $1,835,061.27, of which $887,838.61 was chargeable to capital, $264,110.73 to income, $383,845.74 for staff, and $299,266.19 for repairs, the last two items being charged to revenue.

Adding to the above the further sum of $34,183.75 for general expenditures common to both branches, the total departmental expenditure for railways and canals for the nine months ended on March 31, 1907, amounted to $16,787,843.94.

The total revenue derived from the government works for the nine months was $6,354,955.71, namely, from railways $6,248,311, and from canals $106,644.71, of which the sum of $92,310.51 was derived from hydraulic and other rents.

By Orders in Council of April 27 and May 19, 1903, tolls for passage through any of the government canals were abolished ; the exemption, which was by way of experiment, to continue in force for the two seasons of navigation of 1903 and 1904, only. A further order of February 25, 1905, continued the exemption for the season of 1905, and by an order of June 22, 1905, the system of toll collection was definitely abandoned in respect of any and all the canals of the Dominion.

A sufficient staff has, however, been retained to carry on the essential work of recording the traffic through the canals—information which is requisite for the proper knowledge and appreciation of the commercial progress of the country—and for the collection of such other revenues as are derivable from the leasing of the canal lands and water powers, &c.

The total government expenditure on railways prior to and since confederation (July 1, 1867), up to March 31, 1907, amounts, on capital account, to $162,050,456.79, which includes the sum of $25,000,000 granted (from capital) to the Canadian Pacific Railway Company for its main line. In addition, there has been expended from the consolidated fund a total of $167,210,490.44, which includes $35,578,502.54, paid as railway subsidies in addition to the above to the Canadian Pacific Railway; making a total expenditure of $329,260,947.23.* Of this amount the sum of $13,881,460.65 was expended on construction works prior to confederation, on portions of what is now the Intercolonial Railway system.

The total revenue received from the government railways from July 1, 1867, to March 31, 1907, amounts to $118,819,364.19.

The government expenditure on canals prior to and since confederation, July 1, 1867, to March 31, 1907, amounts, on capital account, to $91,734,718.21, of which $20,593,866.13 was expended prior to confederation, and from the consolidated fund to $24,495,624.73, making a total of $116,230,342.94.

The total revenue derived from canals during the same period is $13,620,228.03.

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* This amount does not include the annual payment of $119,700 to the provincial government of Quebec, being interest at the rate of 5 per cent on the sum of $2,394,000 up to 1905 granted by 47 Vic., Ch. 8 (1884), nor the annual payment of $107,730, being interest at the rate of 4½ p. c. since and including 1905, on the said sum of $2,394,000, for the line between Ottawa and Quebec which sum was transferred to the public debt as a liability, and is dealt with by the Finance Department. (See Public Accounts 1893-94, page 10, and 1906, page 79).

The total expenditure on railways and canals up to March 31, 1907, is, as above, $445,491,290.17, to which must be added for general expenditures, embracing both $739,623.50, making a grand total of $446,230,913.67.

The total revenue derived from railways and canals from July 1, 1867, to March 31, 1907, is $132,439,592.22.

Details of the above will be found in statements of the accountant of the department, Part I., pages 3 to 50, inclusive.

GOVERNMENT RAILWAYS IN OPERATION.

The government railways are the Intercolonial, the Windsor Branch (maintained only, and leased for operation), and the Prince Edward Island railway.

Details respecting these railways and their operation will be found in the appendices, Part II., containing reports from the Chief Engineer of the department, the General Manager of government railways and the officials of these roads.

The gross earnings of the government roads for the nine months from July 1, 1906, to March 31, 1907, the close of the new fiscal year, amounted to $6,509,186.49, of which the Intercolonial Railway produced $6,248,311, the Windsor Branch $45,-440.52, the Prince Edward Island Railway $215,434.97. The gross working expenses amounted to $6,328,895.65, namely, the Intercolonial Railway $6,030,171.83, the Windsor Branch $15,425.32, and the Prince Edward Island Railway $283,148.50.

The operations of the nine months resulted in a net gain of $180,440.84.

The Intercolonial produced a profit of $218,139.17, the Windsor Branch a profit of $30,015.20, and the Prince Edward Island Railway a loss of $67,713.53.

INTERCOLONIAL RAILWAY.

On March 1, 1898, the operations of the Intercolonial were extended to Montreal by means of leases obtained from the Grand Trunk and Drummond County Railway Companies, making an addition of 169·81 miles to the operation of the government line.

The leasing agreement with the Grand Trunk Railway Company, dated February 1, 1898, was confirmed by the Act 62-63 Vic., chap. 5 (1899). Its term extends for a period of ninety-nine years from March 1, 1898; the annual rental being fixed at $140,000.

Under authority of the Act 62-63 Vic., chap. 6 (1899) the Drummond County Railway from Chaudière to Ste. Rosalie, together with the branch from St. Leonard to Nicolet, was acquired by the Dominion ; conveyance being made by a deed dated November 7, 1899.

On October 1, 1904, the Canada Eastern Railway from Gibson to Loggieville, 123·67 miles, was purchased, and on April 19, 1905, the mortgaged Fredericton and St. Mary's bridge and connected property, 1·33 mile, was surrendered to the govern-

ment. The total mileage of the Intercolonial Railway system in operation on July 1, 1906, was 1,445·92 miles. During the nine months ended on March 31, 1907, there has been an addition to the mileage of 2·70 miles, the extension from Sydney to Sydney Mines, making the total mileage 1,448·62 miles on March 31, 1907. In addition, there are numerous spurs and sidings aggregating 366·46 miles, of which 14·10 miles were constructed during the nine months ended on that date.

The reports of the General Manager, the Chief Engineer, the Comptroller and Treasurer, and other officers of the railway will be found in the appendices hereto, Part II., and very full details are there supplied ,which will be of interest.

CAPITAL ACCOUNT.

During the period of nine months ended on March 31, 1907, there was an addition to the capital account of $1,506,248.26, less a refund of $39 on account of the Rivière Ouelle Branch, or $1,506,209.26, making the total expenditure chargeable to capital on the whole road as amalgamated under the Acts 54-55 Vic., chap. 50 (1891), and 62-63 Vic., chaps. 5 and 6 (1899), together with the acquired Canada Eastern Railway, up to March 31, 1907, $82,744,937.89.

The capital additions during the nine months included (omitting cents), the following more important items : for rolling stock, $343,676; additional sidings and spurs, $32,433; increased accommodation at Halifax, $260,124; at Truro, $83,652; at Pictou, $74,638; for the extension to Sydney Mines, $22,195; for strengthening bridges, $118,272; and for double-tracking parts of the line, $50,751. The application of air-brakes to a further number of freight cars, and the substitution of M.C.B. couplers for the old draw-bar on such cars are amongst the various items of betterment.

REVENUE ACCOUNT.

Under the new account system adopted last year, by which the Intercolonial has been brought into conformity in that respect with the other leading roads of Canada and of the United States—to the great advantage of all concerned, and the better control of expenditures—the statements and classifications furnished by the Comptroller and Treasurer, which appear in the appendices hereto, will be found to furnish a class of information, in summarized form, of very interesting character, and not heretofore available.

The main heads under which expenditures on revenue account are grouped in these statements are the following :—Maintenance of way and structures (10 sub-heads), $1,111,888.68; maintenance of equipment (9 sub-heads), $1,180,521.16; conducting transportation (25 sub-heads), $3,659,097.99, against which are certain items of payments for car service, hire of equipment, and rents for tracks, yards and terminals, aggregating $173,873.16; making the net cost $3,485,224.83; and general expenses (7 sub-heads), $147,537.16, aggregating for the nine months ended on March 31, 1907, $5,925,171.83, adding to which the sum of $105,000, for rental of the leased line into Montreal, the total for the nine months ended on March 31,1907, amounts to $6,030,171.83. The usual comparisons with the expenditures of the previous year are necessarily omitted, in consequence of the change in system.

Items of extraordinary expenditure aggregating $216,364.64 were charged during the nine months to 'maintenance and operation.' The principal of these were the following: angle plates and bolts for 80-lb. rails, $58,560; repairs to Lévis crib-work, $5,604.95; repairs to Point du Chêne wharf, $6,516.71; repairs to West River bridge, $14,554.18; new station at Belmont, to replace one destroyed by fire, $3,375; Grand Trunk joint section expenses, including arrears, $19,667.32; two shunting engines, $36,549.30 ; Exchequer Court judgment *re* fire claim of H. M. Price, $55,856, and various legal expenses, aggregating $9,289.40.

The gross earnings for the nine months aggregated $6,248,311, leaving a balance of earnings in excess of expenditure of $218,139.17.

The passenger earnings amounted to $1,952,438.88, or 31·25 per cent of the gross earnings; the freight earnings to $4,032,745, or 64·54 per cent of the gross; the mail and express to $235,039.88, or 3·76 per cent of the gross, and the miscellaneous to $28,087.24, or 0·45 per cent of the gross earnings.

The total engine mileage was 6,810,418 miles; the total train mileage 5,069,575 miles, and the total car mileage 61,236,603 miles.

The gross earnings per mile of railway (1,448·62 miles) were $4,313.29; per engine mile 91·75 cents ; per train mile $1.23 and per car mile 10·20 cents.

The expenses per mile of railway were as follows :—'Maintenance of way and structures,' $767.65; 'Maintenance of equipment,' $814.93; 'Conducting transportation,' $2,405.89; 'General expenses,' $101.85; 'Rental of leased lines,' $72.48.

The expenses per train mile under the above headings were as follows: 'Maintenance of way and structures,' 21·94 cents ; 'Maintenance of equipment,' 23·29 cents; 'Conducting transportation,' 68·75 cents; 'General expenses,' 2·91 cents, and 'Rental of leased lines,' 2·07 cents, making a total of 118·96.

Amongst the 10 items of details of cost of 'Maintenance of way and works,' the most important are the following per train mile :—Repairs of roadway, 14·29 cents; renewal of ties 2.92 cents; repairs and renewals of buildings and fixtures, 1·98 cents; and repairs and renewals of bridges and culverts, 1·24 cents

Amongst the 9 items of details of cost of 'Maintenance of equipment,' per train mile are: 'Repairs and renewals of locomotives,' 9·39 cents; 'of passenger cars,' 3·29 cent ; 'of freight cars,' 6·46 cents.

The 25 divisions of cost of conducting transportation include the following, per train mile : 'Engine and roundhouse men,' 11·92 cents; 'fuel for locomotives,' 22·55 cents; 'train service,' 9·94 cents; 'station service,' 8·39 cents; 'switchmen, flagmen and watchmen,' 3·28 cents; 'loss and damage,' 1·66 cents; 'injuries to persons,' ·05 cent; 'advertising,' ·62 cent.

Under the head of 'General Expenses,' 7 divisions, the cost, per train mile was : for 'Salaries of general officers,' ·22 cent; 'Salaries of clerks and attendants,' 1·15 cent; 'General office expenses and supplies,' ·30 cent; 'law expenses,' ·32 cent.

The proportion of the gross earnings expended on the several main groups of expenditure, respectively, was as follows:—Maintenance of way and structures, $17.80 per cent; of maintenance of equipment $18.89 per cent; conducting transportation, $55.78 per cent; general expenses, $2.36, and rental of leased line $1.68 per cent; making a total of $96.51 per cent, the balance, $3.49 per cent being profit.

The following was the position of the rolling stock of the railway on March 31, 1907 :—Total locomotives, 370; total cars, 11,385; comprising sleeping cars, first-class, 41; second-class, 40; parlour cars, 9; dining cars, 9; passenger cars, first-class, 137; second-class, 97; postal and smoking cars, 36; express and baggage cars, 60; air-brake and instruction car, 1; box cars, 5,996; refrigerator cars, 109; platform cars, 2,780; pulpwood cars, 50; oil tank cars, 25; hopper cars, 1,114; gondola coal cars, 17; coal cars (20-ton capacity), 471; stock cars, 123; auxiliary and tool cars, 21; convertible dump cars, 130; and vans, 119. In addition, there were 53 snow-ploughs, 20 wing ploughs, 25 flangers, 2 rotary steam ploughs, 2 double-track ploughs, 8 steam cranes and 2 ballast plough cars.

Eight locomotives were condemned during the nine months; 23 were purchased on capital account, and 2 from revenue.

The total number of locomotives—as was explained in some detail in my report last year—included a number no longer suitable to the heavy traffic requirements of the present day. In my next report, I propose to show the tractive power of the old stock and that of the new. It may be accepted as a fundamental principle that it is the duty of the railway to keep up, out of of its earnings, the tractive power originally supplied from capital; but it does not necessarily follow that the actual number of engines should be so maintained. It is the capacity for hauling that governs, not the mere numerical equivalent. The same remark applies, in its essence, to the car stock. It is the capacity of the car—so greatly increased in the present day—that is the index to the potential ability of the railway to meet the requirements of traffic.

The value of stores on hand on March 31, 1907, including fuel, roadway and bridge material and miscellaneous stores was $1,341,996.90.

GENERAL OBSERVATIONS.

The following details, showing the principal items of the traffic of the railway during the nine months ended on March 31, 1907, will be found of interest.

The number of passengers carried was 2,044,847, of which number 191,721 were through passengers. The freight traffic aggregated 2,606,073 tons. The local freight amounted to 1,996,869 tons, and the through freight to 609,204 tons.

The following shows the principal goods carried and their quantities :—

Of flour, 1,531,140 barrels; of grain, 2,231,864 bushels; of lumber, 452,602,703 superficial feet; of live stock, 97,381 head; of coal, 635,480 tons; of manufactured goods, 658,850 tons; of firewood, 67,563 tons, of other articles, 398,348 tons.

Details of works executed, and financial and other statements from the officers of the road will be found in the appendices, Part II.

The work of rebuilding the railway workshops at Moncton, destroyed by fire on February 24, 1906, is making excellent progress, and, disastrous as the immediate effects of the fire were, it will be found on completion of the new buildings and of the new system of yard arrangement now contemplated that the final result will be greatly to the advantage of the railway, and will actually produce a saving of expenditure more than sufficient, within a reasonable time, to cover the cost now involved, apart from the greater facility for operation afforded. The buildings will be brought thoroughly up to date in all respects, and the machinery and fittings will be of the most satisfactory character; placing the railway in a position as regards this main point of its operations, equal to the most advanced roads on this continent.

It is desirable that I should draw attention to the fact that, last year and for several previous years, the Intercolonial railway has supplied special train service for the transport of European mails, and this without adequate compensation. It is true that the country at large reaps the advantage of this service, which, of course, would not have to be performed were it not for the requirements of the postal accommodation; the burden of the expense is, however, placed on the Intercolonial railway, the additional cost entailed, and which naturally figured in the total expenditure of the railway, amounting to about $50,000 a year. Not only is the railway debited with this amount, but at the same time, it is debarred from placing a like sum to its credit for the service—thus making a total of $100,000 a year as the actual loss in supplying the service and the loss of earnings fairly due for that service. I am strongly of the opinion that, at all events for the future, the Post Office Department should defray the cost, as an item which it would certainly have to meet were the Intercolonial a private instead of a national road.

The present position is an unfair one to the balance sheets both of the railway and of the Post Office Department.

WINDSOR BRANCH.

The road is 32 miles in length. It extends from Windsor Junction, on the Intercolonial railway, to Windsor.

The railway is operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company. The company pay all charges in connection with the working of the traffic, two-thirds of the gross earnings being allowed them, the government taking the remaining one-third, and assuming all costs of maintenance of the road and works. This arrangement is carried out under an agreement dated December 13, 1892, which extends, for a further term of twenty-one years, arrangements similar to those made in 1871.

All charges for superintendence and supervision of maintenance of work are borne by the government; the duty of supervision is performed by the chief officers of the Intercolonial railway.

The gross earnings of the government (one-third of the gross receipts) for the nine months ended on March 31, 1907, the new closing date of the fiscal year, amounted to $45,440.52. The expenses of maintenance amounted to $15,425.32, leaving the net profit to the government $30,015.20.

All necessary repairs and renewals have been carried out, and the road is in good order.

PRINCE EDWARD ISLAND RAILWAY.

During the fiscal year 1905-06 the mileage of the railway was increased by the opening of the branch from Charlottetown to Murray Harbour, including the Vernon River Branch between Lake Verde and Vernon, in all 52·3 miles, making the total length of this railway system 261·3 miles, up to June 30, 1906. During the fiscal period of nine months up to March 31, 1907, the Montague Branch from Montague Junction to Montague, 6·2 miles, was opened for traffic, making the total mileage 267·5 miles.

CAPITAL ACCOUNT.

The total cost of the road and its equipment chargeable to capital account on March 31, 1907, was $7,307,299.21, there having been an addition of $91,710.52 during the previous nine months.

The chief item of this expenditure was the sum of $70,316 for increased accommodation at Charlottetown.

REVENUE ACCOUNT.

For the nine months ended on March 31, 1907, the gross earnings amounted to $215,434.97, and the working expenses to $283,148.50. The expenditure was in excess of the earnings to the extent of $67,713.53.

The number of passengers carried was 232,371, producing $97,750.52. Of freight, 67,144 tons were carried, producing $98,657.07. The earnings from mails and sundries amounted to $19,027.38.

The engine mileage was 344,050 miles; the train mileage was 252,292 miles, and the car mileage 1,463,186 miles.

The working expenses per train mile were 112·23 cents, and per mile of railway $1,060.48.

The receipts per mile of railway amounted to $806.87.

The value of stores on hand on March 31, 1907, including fuel and steel rails, was $66,801.31.

Details will be found in the appendices, Part II.

BOARD OF RAILWAY COMMISSIONERS FOR CANADA.

By the Act 3 Ed. VII., chap. 58 (1903) amending and consolidating the law respecting railways, the Railway Committee of the Privy Council was abolished and in lieu thereof a Board of Commissioners, under the above title, was created, to consist of three members to be appointed by the Governor in Council; this Act was brought into force on February 1, 1904, by proclamation, on the authority of an Order in Council, dated January 18, 1904, which also appointed certain persons as commis-

sioners. The office of the board is at Ottawa, though it is authorized to hold sessions in any part of Canada. Its decisions and orders are final, subject to appeal to the Supreme Court upon questions of jurisdiction or law, and also to action thereon by the Governor in Council, in his discretion.

NATIONAL TRANSCONTINENTAL RAILWAY.

Under an agreement, dated July 29, 1903, ratified by the Dominion Act of that year, chap. 71, and under a modifying agreement dated February 18, 1904, ratified by the Act of that year, chap. 24, the Grand Trunk Pacific Railway Company, a company incorporated by the Act of 1903, chap. 122, have agreed with His Majesty in respect of the construction of a line of railway, wholly upon Canadian territory, between the city of Moncton, in the province of New Brunswick, and the navigable waters of the Pacific ocean, at or near Port Simpson or some other port in British Columbia, as may be agreed upon. The railway is to be composed of two divisions, namely, the eastern division, between Moncton and Quebec, thence westerly through the northern part of the provinces of Quebec and Ontario, and through the province of Manitoba to the city of Winnipeg, and the western division, between Winnipeg, or some point on the said eastern division, and the Pacific ocean. The eastern division is to be constructed by the government under four commissioners appointed by the Governor in Council, and thereafter leased to and maintained and operated by the company, who undertake to construct at their own cost and to maintain and operate the western division. The lease of the eastern division is to be for a period of 50 years, at a rental of three per cent per annum upon the cost of its construction; the first seven years of the term to be free of rent; both divisions are to be equipped by the company, the first equipment to be of a value not less than $20,000,000.

By way of assistance to the company in the construction of the western division, it is provided that the government shall guarantee payment of the principal and interest of an issue of bonds to be made by the company for an amount sufficient to produce a sum equal to 75 per cent of the cost of its construction, such amount not to exceed $13,000 per mile in respect of the prairie section from Winnipeg to the eastern limit of the Rocky mountains (such limit to be established by the Chief Engineer of the company and the Chief Engineer of the government, as the result of actual surveys to be made).

The several expenditures to be made under these Acts and agreements are to be so made from appropriations by parliament for the purpose, and on the recommendation of the Minister of Railways and Canals, to whom accounts of all receipts, expenditures and liabilities are to be furnished monthly. The board are required to furnish annually a report to the Governor in Council, through the Minister of Railways and Canals, showing the receipts and expenditures of the year, and other information as to the railway, which report is to be submitted to parliament.

The Board of Commissioners was duly appointed by Order in Council, together with the necessary officers, and is established with its headquarters in the city of Ottawa.

The report of the board for the fiscal period of nine months ended March 31, 1907, has been received, and will be laid before parliament in due course.

It may, however, be desirable to briefly summarize here the results of operations carried on.

The total expenditure by the board amounted for the fiscal period to $5,537,867.50.

The previous expenditure amounted to $2,609,627.13, making the total expenditure up to March 31, 1907, $8,147,494.63.

From the report of the board it appears that the various surveys carried on have produced satisfactory results, and that the basal intention that the railway, throughout, should be so located as to afford grades of exceptional ease in operation not exceeding 0·40 per 100 against east bound and 0·60 per 100 against west bound traffic and curves of the greatest possible radius has been closely regarded, though the endeavour to meet this requirement has, of course, entailed much additional survey work.

Connected lines of survey have now been obtained for the entire distance between Moncton and Winnipeg.

Contracts for construction have been awarded for 852 miles. For fuller information see report of the Commissioners Transcontinental railway.

On the Western Division of the railway to be built by the Grand Trunk Pacific Railway Company, the report of the Government Chief Engineer, Mr. Collingwood Schreiber, C.M.G., dated May 15, 1907, shows the position to be as follows, up to March 31, 1907 :—

The surveys of the line have been completed and the plans and profiles of location have been approved by Orders in Council from a point about 32 miles west from Winnipeg to Edmonton. From Edmonton to a point 27 miles west of the Yellowhead Pass the location plans and profiles have been approved ; but may be revised as improvements develop. The balance of the line to Prince Rupert, the proposed terminus on the Pacific coast, has been located, and plans and profiles submitted ; but an improved revision was expected. The Chief Engineer states that a very good location has been made, only one grade exceeding four-tenths of one per cent ; the exception being a one per cent grade for a distance of about 20 miles. The work, for mountainous work, will not be heavy, except for the distance of about 170 miles east from Prince Rupert, where it will be almost entirely very heavy rock excavation.

The construction work under contract and progress is from Portage la Prairie, 275 miles westward, on which about 75 per cent of the grading was done, and about 60 per cent of the culverts, bridges, &c.; a further distance of 141 miles to a point a short distance west of the crossing of the South Saskatchewan river, on which 48 per cent of the grading and about 38 per cent of the entire work was done. For a further distance of about 316 miles to Edmonton about 25 per cent of the grading was done. The bridges over the River Assiniboine, the south and north Saskatchewan rivers,

and the Battle river are under contract. The severity of the last winter has greatly interfered with the work of construction. With regard to track laying the Chief Engineer reports that though steel rails of 80 lbs. to the yard have been delivered for the whole distance, from Winnipeg to Edmonton, 800 miles, the shortage of ties has delayed tracklaying; only 36 miles of track being laid up to March 31, 1907. About 36 miles of telegraph had been erected. This report of Mr. Schreiber will be found in the appendices.

RAILWAY SUBSIDIES.

The following pages show, in alphabetical sequence, the position of those companies whose dealings with the government in respect of subsidies are not yet closed. Reports of previous years give information as to companies whose subsidies have been fully earned and paid prior to July 1, 1906.

A tabulated statement of payments will be found in Part I., and a list of subsidy agreements entered into during the fiscal year in Part IV.

The several subsidy Acts passed in each year from 1882 will be found in Part III. No subsidies were authorized in the session of 1895, 1896, 1898, 1902 and 1905.

Information has been brought down to the end of the fiscal period 1906-07, March 31, 1907.

SUBSIDY CONTRACTS ENTERED INTO DURING 1906-07, TO MARCH 31, 1907.

Bay of Quinté Railway Company.—From Tweed to Bannockburn, 20 miles; contract dated October 31, 1906.

Halifax and South-Western Railway Company.—From a point near Halifax to a point at or near Barrington Passage, 185 miles contract, dated October 8, 1906.

Napierville Junction Railway Company.—From St. Constant to a point at or near the international boundary on the Delaware and Hudson railroad, 28 miles; contract dated October 10, 1906.

Quebec Central Railway Company.—From St. Francis to St. George, 9 miles; contract dated January 28, 1907.

Quebec and Lake St. John Railway Company.—From Roberval to the Government wharf at Lake St. John, 1 mile; contract dated November 24, 1906.

York and Carleton Railway Company.—From its present terminus westerly, 5 miles; contract dated August 20, 1906.

SUBSIDIES PAID DURING FISCAL YEAR ENDED MARCH 31, 1907.

Atlantic and North-west Railway		$ 186,600 00
Bay of Quinté Railway		72,602 45
Brockville, Westport and Sault Ste. Marie Railway		35,600 00
Canadian Pacific Railway (Stayner ville Branch)		9,600 00
Chateauguay and Northern Railway, 36·51 miles		84,224 75
Halifax and South-Western Railway		268,107 20
International Railway Company of New Brunswick (formerly Restigouche and Western Railway)		51,200 00
James Bay Railway		420,608 00
Klondike Mines Railway		96,000 00
Middleton and Victoria Beach Ry., 39·30 miles		27,667 20
Midland Railway Company, Limited		4,967 70
Quebec and Lake St. John Ry., 35 miles	$64,512	
1 mile	3,200	
		67,712 00
		$1,324,889 30

Less refunds in connection with subsidy payments to Atlantic and Lake Superior Railway Company :—

On account of duplicate claims	$ 283 02	
On account of claims not paid (cheques returned)	1,238 80	
		1,521 82
		$1,323,367 48

GOVERNMENT ACTION AS TO SUBSIDIZED RAILWAYS.

(The numbers within brackets after title of the company refer to the lists of railways for which subsidies have been authorized by Parliament year by year, from the commencement of the system of railway subsidies in 1882, in the appendices hereto.)

With regard to the several lines of railway subsidized by the Dominion, the following represents the action taken and the progress made, in so far as the Dominion government is concerned; only those lines and companies being mentioned as to which definite steps, other than merely preliminary, have been taken towards securing the subsidy.

It has to be noted that by the Act 6 Edward VII., chap. 12 (1906), the termination of the fiscal year has been changed from June 30 to March 31 in each year, such change taking effect on and after July 1, 1906, except that the fiscal period 1906-07 shall consist of nine months only, beginning on the said July 1, 1906, and ending on March 31, 1907.

The following shows the aggregate of the payments made on subsidy accounts :—

For the fiscal year	1883-84,	ended on June 30,	1884..	$ 208,000 00
"	1884-85	"	1885..	403,245 00
"	1885-86	"	1886..	2,171,249 00
"	1886-87	"	1887..	1,406,533 00
"	1887-88	"	1888..	1,027,041 92
"	1888-89	"	1889..	846,721 83
"	1889-90	"	1890..	1,678,195 72*
"	1890-91	"	1891..	1,265,705 87*
"	1891-92	"	1892..	1,248,215 93*
"	1892-93	"	1893..	811,394 07*
"	1893-94	"	1894..	1,229,885 10*
"	1894-95	"	1895..	1,310,549 10*
"	1895-96	"	1896..	834,745 49*
"	1896-97	"	1897..	416,955 30*
"	1897-98	"	1898..	1,414,934 78*
"	1898-99	"	1899..	3,201,220 05*
"	1899-1900	"	1900..	725,720 35*
"	1900-01	"	1901..	2,512,328 86*
"	1901-02	"	1902..	2,093,939 00*
"	1902-03	"	1903..	1,463,222 34*
"	1903-04	"	1904..	2,046,878 45*
"	1904-05	"	1905..	1,275,629 53*
"	1905 06	"	1906..	1,637,574 37*
"	1906-07	ended on Mar. 31,	1907..	1,323,367 48*
				$32,553,252 54

To the above there have to be added the following exceptional subsidies :—

The Canada Central Railway, paid between 1878-83..	$ 1,525,250 00
The Canada Pacific Railway extension from St. Martin's Junction to Quebec, paid in 1885.. ..	1,500,000 00
Total subsidies paid from 'Consolidated Fund' up to June 30, 1906....	$35,578,502 54
The main line subsidy to the Canadian Pacific Railway was paid from 'Capital,' amounting to.. ..	25,000,000 00
Total paid as subsidies..	$60,578,502 54

The above does not include the amount $2,394,000, due to the province of Quebec for the railway betwen Ottawa and Quebec, which amount has been transferred to

* In these amounts the subsidy of $186,600 a year payable to the Atlantic and North-west Railway Company, for 20 years from July 1, 1889 is included. Payment is made by the Finance Department.

the public debt, and on which interest at 5 per cent was paid, amounting to $119,700 a year, under the Act of 1884, chap. 8, up to 1905, and at 4½ per cent, amounting to $107,730 a year, since and including that year.

NOTE.—The names, locations and mileage of the several railways of the Dominion, together with those of the branch lines composing their systems will be found in the 'Railway Statistics,' now issued as a separate report.

ALBERTA SOUTHERN RAILWAY COMPANY.

(See Annual Report of 1891-92.)

ALGOMA CENTRAL AND HUDSON BAY RAILWAY COMPANY

(See Annual Report of 1905-06.)

ATLANTIC AND LAKE SUPERIOR RAILWAY COMPANY.

(See Annual Report of 1905-06.)

ATLANTIC AND NORTH-WEST RAILWAY COMPANY.

(Leased to the Canadian Pacific Railway Company.)

(See Annual Report of 1889-1890.)

The full history of this subsidy was shown in the annual report for 1889-90. The company receives an annual subsidy of $186,600 for 20 years. The first payment having been made in 1889-90. The total paid up to March 31, 1907, is $3,358,800. Payment is made by the Department of Finance direct.

ATLANTIC, QUEBEC AND WESTERN RAILWAY COMPANY.

(See No. 595.)

This company was incorporated by the Act of Quebec, 1 Ed. VII., (1901), chap. 63, with powers to construct a railway from Gaspé Basin to some point north of Causapscal, but not beyond Sayabec, in the county of Matane. Other powers were granted of a general commercial character.

By the Dominion Act, 3 Ed. VII., chap. 81 (1903), the above company was declared to be for the general advantage of Canada, and authority was granted to them, in addition to that conferred by their Act of incorporation, to construct a railway from a point north of Causapscal on the Intercolonial Railway, to a point at or near Edmundston, N.B.

By the Dominion Subsidy Act, 3 Ed. VII. (1903), chap. 57, item 51, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a railway from Gaspé to a point at or near Causapscal on the Intercolonial Railway, and from that point to Edmundston, not exceeding 260 miles; and for a railway from Paspebiac to Gaspé, not exceeding 102 miles.

The company having applied for the subsidy granted for the line from Paspebiac to Gaspé, a contract was entered into with them, accordingly, on February 25, 1905, under authority of order in council, dated January 28, 1905.

No payments have been made up to March 31, 1907.

BAIE DES CHALEURS RAILWAY COMPANY.

(See Annual Report of 1895-96.)

(See also Atlantic and Lake Superior Railway Company.

THE BAY OF QUINTÉ RAILWAY COMPANY.

(See Nos. 434, 581 and 661.)

This company was incorporated by the Dominion Act of 1881, chap. 46, under the name 'The Bay of Quinté Railway and Navigation Company,' with powers to construct a line of railway from Mill Point, county of Hastings, on the Bay of Quinté, to a point of junction with the Grand Trunk Railway.

By the Act of 1896 it was empowered to amalgamate with the Kingston, Napanee and Western Railway Company (formerly the Napanee, Tamworth and Quebec Railway Company), under the name of the Bay of Quinté Railway Company. Its powers were extended to cover the construction of branch lines, not exceeding 20 miles in length, each to connect with mines and mineral lands, and by the Act of 1900, chap. 50, extensive powers were conferred for development of electrical power, and for mining and timber industries. Their powers of construction were extended to June 14, 1905.

By the Subsidy Act of 1899, chap. 7, item 20, as amended by clause 9 of the Subsidy Act of 1900, chap. 8, the grant of aid was authorized to the extent of $3,200 per mile for 10 miles, for extensions, branches and additions to connect their lines of railway or to connect the said lines or connecting lines with iron or other mines or mineral or wood lands in certain counties named. This was in lieu of part of the balance of subsidy granted to the Kingston, Napanee and Western Railway in 1892.

Under date of December 30, 1902, a subsidy contract was entered into with them accordingly.

By the Subsidy Act of 1899, chap. 7, item 45, the grant of aid to the extent of $3,200 per mile with an addition of 50 per cent on average expenditure in excess of $15,000 per mile, the whole not exceeding $6,400 per mile, was authorized for an extension not exceeding 2 miles, of the company's line, westerly, from a point at or near Richmond Boundary Road, near Deseronto, and also for an extension from the end of the said two miles, northerly, for a distance not exceeding 3 miles.

Under date of December 30, 1903, a separate contract was entered into with the company for each of these two sections.

During the fiscal year 1902-03 payment was made of $19,200 for the six miles between Deseronto and Napanee, under the subsidy granted by item 20 of the Act of 1899.

By the Subsidy Act of 1903, chap. 57, item 37, the grant of aid to the extent of $3,200 per mile with an addition of 50 per cent on the average expenditure in excess of $15,000 per mile, the whole not exceeding $6,400 per mile, was authorized for further extension of the company's line of railway, from the northern terminus thereof, commencing from a point at or near Actinolite, thence in a north-westerly direction via the villages of Queensborough and Bannockburn, to a point in the township of Marmora or Lake in Hastings county, not exceeding 20 miles in all.

Under date of January 23, 1904, a subsidy contract was entered into with the company for the construction of this extension.

By the Railway Subsidy Act, 6 Edward VII. (1906), chap. 43, item 23, the subsidy granted by chap. 7 of 1899, section 2, item 45, in part, and the subsidy granted by chapter 57 of 1903, section 2, item 37, 20 miles of railway, were revoted.

The company were admitted to contract on October 8, 1906, under authority of an order in council, dated September 21, 1906, the time for completion being fixed as by August 1, 1907.

This extension of the railway is completed, and during the nine months between June 30, 1906, and March 31, 1907, the subsidy, $72,602.45, has been paid.

The total payments to this company on subsidy account amounted to $69,120, up to June 30, 1904; but there had been previously paid to the Kingston, Napanee and Western Railway Company a total of $208,732.80.

BEAUHARNOIS JUNCTION RAILWAY COMPANY.

(Operated by New York Central Railroad.)

(See Annual Report of 1895-96.)

BEERSVILLE COAL AND RAILWAY COMPANY.

(See Annual Report of 1905-06.)

BELLEVILLE AND NORTH HASTINGS RAILWAY COMPANY.

(Now part of Grand Trunk Railway System.)

(See Annual Report of 1888-89.)

BOSTON AND NOVA SCOTIA COAL COMPANY.

(See Inverness and Richmond Railway Company.)

(See Annual Report of 1895-96.)

BRACEBRIDGE AND TRADING LAKE RAILWAY COMPANY.

(See Annual Report of 1905-06.)

BROCKVILLE, WESTPORT AND SAULT STE. MARIE RAILWAY COMPANY.

(See No. 670.)

The history of this railway was given in the annual report for 1896-97, with a statement of the subsidies paid up to the close of the year 1891-92.

By the Railway Subsidy Act, 6 Edward VII. (1906), chap. 43, item 32, the balance remaining unpaid of the subsidy granted by chapter 3 of 1889, not exceeding $3,200 per mile, and also the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, which was regranted by chapter 5 of 1892; the whole not exceeding $86,800, being a revote of the subsidy granted by chap. 4 of 1894, and that the said subsidy or so much thereof as has heretofore been agreed upon by the terms of an agreement filed in the Department of Railways and Canals between said Brockville, Westport and Sault Ste. Marie Railway Company and the creditors of said railway company, to be paid over to the said creditors or the legal representatives of said creditors as mentioned in said agreement.

By an order in council, dated December 8, 1906, authority was given for payment to the creditors of the company, through commissioners therein named, the said balances of subsidy.

During the nine months between June 30, 1906, and March 31, 1907, the balance of subsidy due, $35,600, has been paid, making the total payments to the company up to March 31, 1907, $140,800.

BRANTFORD, WATERLOO AND LAKE ERIE RAILWAY COMPANY.

(Now part of Toronto, Hamilton and Buffalo Railway.)

(See Annual Report of 1895-96.)

BRUCE MINES AND ALGOMA RAILWAY COMPANY.

(See Annual Report of 1904-05.)

BUCTOUCHE AND MONCTON RAILWAY COMPANY.

(See Annual Report of 1893-94.)

CALGARY AND EDMONTON RAILWAY COMPANY.

(See Annual Report for 1890.)

(Leased to Canadian Pacific Railway.)

CANADA ATLANTIC RAILWAY COMPANY.

(Now part of Grand Trunk Railway System.)

(See Annual Report of 1888-89; also see under head of Ottawa, Arnprior and Parry Sound Railway Company.)

CANADA EASTERN RAILWAY COMPANY (FORMERLY NORTHERN AND WESTERN RAILWAY COMPANY OF NEW BRUNSWICK, NOW PART OF THE INTERCOLONIAL SYSTEM.)

(See the Annual Reports for the years 1894-95 and 1899-1900.)

CANADIAN BRIDGE COMPANY.

(See South Shore Railway Company, Quebec.)

CANADIAN NORTHERN RAILWAY COMPANY.

(See Nos. 446,493.)

By the Dominion Act 62-63 Vic., chap. 57 (1889), authority was granted for the amalgamation of the Winnipeg Great Northern Railway Company (formerly the Winnipeg and Hudson's Bay Railway and Steamship Company, the name of which was by the Act of 1887, chap. 81, changed to the Winnipeg and Hudson's Bay Railway Company), and the Lake Manitoba Railway and Canal Company, under the name of the Canadian Northern Railway Company, and the agreement for such amalgamation was confirmed; authority also was given for hte construction of a railway from Prince Albert to Edmonton, also a branch from a point on that line to the Peace river, together with certain other branch lines.

The Dominion Act 1 Ed. VII., chap. 52 (1901), confirmed certain agreements for amalgamation of the Manitoba and South-Eastern Railway Company and the Ontario and Rainy River Railway Company with the above company; it also granted authority to construct certain lines of railway described.

By the Dominion Act 1 Ed. VII., chap. 53 (1901), authority was granted to the above company, to lease, with the option of purchase the Northern Pacific and Manitoba Railway, the Winnipeg Transfer Railway Company, Limited, the Portage and North-Western Railway Company, and the Waskada and North-Eastern Railway Company.

By the Dominion Subsidy Act 62-63 Vic. (1889), chap. 7, item 32, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for 100 miles of railway from a point on the Winnipeg Great Northern Railway north of Swan river to Prince Albert, N.W.T.

By the Dominion Subsidy Act 63-64 Vic. (1900), chap. 8, item 18, the grant of a similar subsidy for 100 miles of railway in further extension of the company's line from north of Swan river towards Prince Albert, was authorized.

The company having applied, they were admitted to contract under both subsidies, the two agreements being dated December 7, 1903.

The payments made to this company under the aforesaid agreements aggregate the following amounts :—

For the Ontario and Rainy River Railway (see the Annual Report for 1902-03), $1,534,976, all paid prior to June 30, 1903.

For the Prince Albert Branch, $374,156.

The total of the above payments amounts to $1,909,132, up to June 30, 1904.

By the Special Act 3 Ed. VII., chap. 7 (1903), assistance was granted for the extension of the company's railway for 620 miles from Grandview, the terminus of their Gilbert Plains branch to Edmonton, and for a distance of 100 miles east of Prince Albert to Prince Albert, by guaranteeing the principal and interest at 3 per cent per annuam of first mortgage bonds and other securities to the extent of $13,000 a mile, the principal to be payable in 50 years from the passage of the Act.

Under date July 29, 1903, a trust mortgage between the Canadian Northern Railway Company, the British Empire Trust Company, Limited, the National Trust Company, Limited, and His Majesty, was executed in pursuance of the provisions of the said Act, the security to be held by the trustees to be a charge on the two lines of railway thereunder to be constructed, with their equipment, buildings and appurtenances, on the balance of the Prince Albert Branch east of Erwood, and on the company's already constructed and operated lines from Port Arthur westwards as enumerated in a schedule attached, with their buildings, equipment and appurtenances.

Under the same date, July 29, 1903, an agreement was made with the company for the construction of the said two lines of railway, accordingly, the line from Grandview to Edmonton to be completed by October 1, 1905, and the 100 miles east from Prince Albert by the same date. By an Order in Council of November 3, 1905, the time for completion was extended to October 1, 1906.

Under the authority of orders in council, passed after inspections of the roads in question, payments were made under the said guarantee agreement from the proceeds of the securities deposited with the Receiver General, for that purpose. Such payments, the last of which was made on September 5, 1905, amounting in all to $8,523,-597.43, being the balance of the securities in question, which were thereupon exhausted. The two railways were constructed and open for traffic towards the end of the year 1906.

For certain portions of the company's lines, under the aforesaid amalgamations, land grants have been authorized (see Winnipeg Great Northern Railway Company and Manitoba and South-Eastern Railway Company in annual report for 1895-96.) These matters are dealt with by the Department of the Interior.

The company further, by virtue of this amalgamation, have an agreement with the government for the transport of men, supplies, materials and mails for 20 years over the portion of their line from Gladsone to a point half way to the River Saskatchewan.

CANADIAN PACIFIC RAILWAY COMPANY.

(Revelstoke to Arrow Lake.)

(See Annual Report for 1896-97.)

CANADIAN PACIFIC RAILWAY COMPANY.

(Pipestone Branch—Antler Station to Moose Mountain.)

(See Annual Report for 1901-02.)

CANADIAN PACIFIC RAILWAY COMPANY.

(Crow's Nest Pass Railway.)

(See Annual Report for 1902-03.)

CANADIAN PACIFIC RAILWAY COMPANY.

(Waskada Branch.)

(See Annual Report of 1905-06.)

CANADIAN PACIFIC RAILWAY COMPANY.

(Pheasant Hills Branch.)

(See No. 616.)

By the Subsidy Act of 1903, Ed. VII., chap. 57, item 72, the grant of a subsidy of $3,200 a mile with an addition of 50 per cent on cost in excess of $15,000 a mile, but not exceeding in all $6,400 a mile, was authorized for a railway from a point on the main line of the Canadian Pacific Railway between Moosomin and Elkhorn, northwesterly to a point in the neighbourhood of the Pheasant Hills, not exceeding 136 miles.

The company having applied, a contract was entered into with them on January 14, 1904, under authority of orders in council of November 17, 1903, and January 12, 1904.

During the fiscal year, 1905, subsidy was paid for this work to the extent of $56,576, making the total payments up to June 30, 1905, $435,200.

No further payments have been made up to March 31, 1907.

CANADIAN PACIFIC RAILWAY COMPANY.

(Dyment Branch.)

(See Annual Report for 1902-03.)

CANADIAN PACIFIC RAILWAY COMPANY.

(See No. 593 and 630.)

By the Railway Subsidy Act 3 Ed. VII. (1903), chap. 57, section 2, item 49, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on average cost in excess of $15,000 a mile, but not exceeding in all $6,400 a mile, was authorized for a branch line of railway from a point at or near the intersection of the Canadian Pacific Railway and the Great Northern Railway between St. Philippe d'Argenteuil and Lachute, thence in a northerly direction, passing through the village of Brownsburg, not exceeding three miles.

By the Railway Subsidy Act, 4 Ed. VII. (1904), chap. 34, item 4, the subsidy granted by chap. 57 of 1903, section 2, item 49, 3 miles of railway, was revoted.

This company having applied for the said subsidy, a contract was entered into with them for the work on March 20, 1906, under authority of orders in council, dated November 8, 1905, and February 19, 1906.

During the nine months between June 30, 1906, and March 31, 1907, payment has been made to the extent of $9,600, the total amount to the latter date.

CANADIAN PACIFIC RAILWAY COMPANY.

(West Selkirk—Lake Winnipeg Branch.)

(See Annual Report for 1902-03.)

CAP DE LA MADELEINE RAILWAY COMPANY.

(Leased to Canadian Pacific Railway.)

(See Annual Report of 1896-97.)

CAPE BRETON RAILWAY EXTENSION COMPANY, LIMITED.

(See Annual Reports of 1895-96 and 1905-06.)

CENTRAL COUNTIES RAILWAY COMPANY.

(See Annual Report of 1905-06.)

CENTRAL ONTARIO RAILWAY COMPANY.

(See Annual Report for 1900-01.)

(See No. 547.)

The history of this railway was given in the annual report for 1900-01, with a statement of the subsidies paid for the then completed line of railway.

By the Railway Subsidy Act, 3 Ed. VII. (1903), chap. 57, section 2, item 4, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on average cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for a further extension of the company's railway from a point at or near Bancroft to a point on the Canada Atlantic Railway at or near Whitney, not exceeding 40 miles, in lieu of subsidies granted by item 5 of section 2 of chapter 8 of 1900, and item 16 of section 2 of chapter 7 of 1901, respectively.

The company having applied for this subsidy a contract was entered into with them accordingly on September 6, 1905, under authority of an order in council, dated July 22, 1905; the road to be completed by August 1, 1907.

No payments have been made up to March 31, 1907.

CENTRAL RAILWAY RAILWAY COMPANY OF NEW BRUNSWICK.

(See Annual Report for 1902-03.)

CHATEAUGUAY AND NORTHERN RAILWAY RAILWAY COMPANY.

(See Nos 507, 508, 509, 599 and 631.)

This company was incorporated by the Quebec Act of 1895 (1), chap. 64, its powers of construction being modified by the Act, chap. 75 of 1896.

By the Dominion Subsidy Act of 1900, 63-64 Vic., chap. 8, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for 42 miles of a railway from a point in Hochelaga ward, Montreal, to a point on the Great Northern Railway in or near the town of Joliette, with a spur into the town.

The company were admitted to contract for this work on January 19, 1901.

On the same date they were admitted to contract for two other works, specially subsidized by the same Act, viz., for a railway, vehicular, and foot-passenger bridge from Bout de L'Ile to Charlemagne, at the junction of the Rivers Ottawa and St. Lawrence, $150,000, and for a bridge across the Lac Ouareau river, $15,000. No portion of these three subsidies has been paid up to June 30, 1903.

By the Dominion Subsidy Act of 1903, chap. 57, item 55, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for 16 miles of a railway from a point on its main line at or near L'Epiphanie, via the parish of St. Jacques de l'Achigan to the village of Rawdon.

The company were admitted to contract for this work on December 12, 1903.

By the Dominion Subsidy Act of 1903, chap. 57, sec. 3, subsec. 4, a subsidy was authorized for the Bout de L'Ile bridge of $50,000, in addition to that granted by item 33 of section 2, of chap. 8, of 1900.

The total of the payments made to the company up to June 30, 1904, amounted to $151,595, including $99,000 for bridges.

By the Railway Subsidy Act, 4 Edw. VII. (1904), chap. 24, section 3, the balance remaining unpaid of the subsidy granted by item 33 of section 2 of chapter 8 of 1900, for a single-track standard railway bridge, with two roadways 10 feet wide for free vehicular traffic, the same as upon a public highway, from Bout de L'Ile to Charlemagne at the junction of the Ottawa and St. Lawrence rivers, a sum not exceeding $51,000 was authorized.

The company were admitted to contract for this work on November 12, 1904, under authority of an order in council dated September 26, 1904.

The two bridges, subsidized as above, are completed, and during the past fiscal year the full amount of the subsidies, $116,000, has been paid, making the total payments for these works $215,000.

By the Railway Subsidy Act, 4 Edw. VII. (1904), chap. 34, section 2, item 5, the subsidy granted by chapter 8 of 1900, section 2, item 32, 42 miles of railway, was revoted.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on June 26, 1906, under authority of an order in council dated February 16, 1906.

During the nine months between June 30, 1906, and March 31, 1907, payments have been made to the extent of $84,224.75, making the total payments up to the latter date, exclusive of bridges, $136,819.75.

CHATHAM BRANCH RAILWAY COMPANY.

(Now part of Intercolonial Railway.)

(See Annual Report of 1893-94.)

CHIGNECTO MARINE TRANSPORT COMPANY.

(See Annual Report for 1894-96.)

COAST RAILWAY COMPANY OF NOVA SCOTIA.

(Name changed to Halifax and Yarmouth Railway Company by Nova Scotia Statute of 1899, chap. 128.)

(See Annual Report of 1904-05.)

COMPAGNIE DU CHEMIN DE FER DE COLONIZATION DU NORD.

(See Annual Report of 1905-06.)

COBOURG, NORTHUMBERLAND AND PACIFIC RAILWAY COMPANY.

(See Annual Report for 1900-01.)

COLUMBIA AND KOOTENAY RAILWAY AND NAVIGATION COMPANY.

(Leased to the Canadian Pacific Railway Company.)

(See Annual Report for 1891-92.)

CORNWALLIS VALLEY RAILWAY COMPANY.

(Now part of Dominion Atlantic Railway.)

(See Annual Report for 1891-92.)

CUMBERLAND RAILWAY AND COAL COMPANY.

(See Annual Report for 1894-95.)

DOMINION ATLANTIC RAILWAY COMPANY.

(See Western Counties Railway Company.)

DOMINION EASTERN RAILWAY COMPANY.

(See Annual Report for 1900-01.)

DOMINION LIME COMPANY.

(Now part of Hereford Railway.)

(See Annual Report for 1888-89.)

DOMINION COAL COMPANY.

(Now Sydney and Louisburg Railway.)

(See Annual Report for 1895-96.)

DRUMMOND COUNTY RAILWAY COMPANY.

(Now part of Intercolonial Railway.)

(See Annual Report of 1900-01.)

EAST RICHELIEU VALLEY RAILWAY COMPANY.

(Now part of Quebec Southern Railway.)

(See Annual Report of 1888-89.)

EDMONTON, YUKON AND PACIFIC RAILWAY COMPANY.

(See Nos. 455, 572.)

This company was incorporated by the Dominion Act of 1896, 59 Vic., chap. 71, under the name of the Edmonton District Railway, with powers to construct and operate a railway from some point within the town of Edmonton to a point in South Edmonton on the Calgary and Edmonton Railway and to connect therewith; also from some point within the town of Edmonton, via the village of St. Albert, to a point on the Athabaska river, at or near Fort Assiniboine, with a branch to Stony Plains; also from some point within the town of Edmonton to a point at or near Fort Saskatchewan, together with a branch to a point on Sturgeon river. Other powers were granted of a general commercial character.

By the Dominion Act of 1898, 61 Vic., chap. 63, the company was empowered to extend their line of railway from the Athabaska to the navigable waters of Pelly river.

By the Dominion Act of 1899, 62-63 Vic., chap. 64, the name of the company was changed to the above, with powers to extend the railway via the Yellow Head Pass or the Peace River Pass, to a point in British Columbia, or to connect with the railway which the British Pacific Railway Company is authorized to construct, and also to construct and operate a branch line to some point on the Yukon river.

By the Dominion Subsidy Act of 1903, 3 Edw. VII., chap. 57, item 28, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for 50 miles of a railway from the town of Strathcona to Edmonton, and thence westerly towards the Yellow Head Pass.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on June 24, 1904, the road to be completed by December, 1906.

No payments have been made up to March 31, 1907.

DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE FISCAL PERIOD FROM JULY 1, 1906,
TO MARCH 31, 1907

Submitted in accordance with the provisions of the Revised Statutes of Canada, Chapter 37, Section 28

PRINTED BY ORDER OF PARLIAMENT

OTTAWA
PRINTED BY S. E. DAWSON, PRINTER TO THE KING'S MOST EXCELLENT MAJESTY,
1907

[No 20—1908]

To His Excellency the Right Honourable Sir Albert Henry George, Earl Grey, Viscount Howick, Baron Grey of Howick, in the County of Northumberland, in the Peerage of the United Kingdom, and a Baronet; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, &c., &c., Governor General of Canada.

MAY IT PLEASE YOUR EXCELLENCY,—

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal period from July 1, 1906, to March 31, 1907.

GEO. P. GRAHAM,
Minister of Railways and Canals.

CONTENTS.

	Part.	Page.
Report of the Deputy Minister of Railways and Canals	....	ix
Statement of Accountant of Department	I	3
Report of the Chief Engineer, including Reports of General Manager of Government Railways and Superintendents of Canals	II	3
Railway Subsidies, Acts passed respecting	III	3
Miscellaneous Statements, including—		
Subsidy agreements for the construction of railways	IV	2
Contracts entered into	IV	4
Water power and other public property leased	IV	8
Property conveyed	IV	14
Damages released	IV	18
Report of the Government Chief Engineer for the Western Division of the National Transcontinental Railway	II	177

(For Index see End of Volume.)

MAPS

ACCOMPANYING REPORT OF THE DEPUTY MINISTER.

RAILWAY SYSTEM.

1. General map of the Dominion.
2. British Columbia and Alberta.
3. Manitoba and Assiniboia and part of Saskatchewan.
4. Ontario and Manitoba.
5. Ontario and Quebec.
6. Nova Scotia, New Brunswick, Prince Edward Island and part of Quebec.

CANAL SYSTEM.

7. Canadian Ship Canal, and also St. Mary's Falls Canal, Mich., U.S.A.
8. Line of Welland Canal between Lakes Erie and Ontario.
9. Trent Navigation and Murray Canal.
10. St. Lawrence, Ottawa, Rideau and Richelieu Canals.

REPORT OF THE DEPUTY MINISTER.

To the Honourable Geo. P. Graham,
Minister of Railways and Canals.

Sir,—I have the honour to submit the annual report of the Department of Railways and Canals for the fiscal period of nine months ended March 31, 1907. By the Act of 1906, chap. 12, 'An Act respecting the fiscal year,' it was enacted that, dating from July 1, 1906, the period from April 1 in one year to March 31 in the next year shall constitute the 'fiscal year,' the year 1906-07 to consist of nine months, only.

The annual reports of the engineers, together with general and special reports from superintendents, both of railways and canals, and from other officers in the department, are given in appendices.

In Part I. will be found statements showing the amounts expended during the past fiscal year in construction, repair and maintenance of the several works under the department; also statements showing total expenditure on each canal since its construction, and on each of the government railways; also a statement showing the payments made, year by year, to subsidized railways, with the aggregates of such payments.

GENERAL SUMMARY.

The expenditures of the department for the nine months ended on March 31, 1907, on its works of construction, operation and maintenance, both railway and canal, and in furtherance, by subsidy under authority of parliament, of outside railway enterprises, are as follows :—

The total railway expenditure for this period amounted to $14,918,598.92; of which $7,174,370.17 was charged to capital, $6,328,745.65 to revenue, and $1,415,483.10 to income.

The expenditure on capital included $5,537,867.50 for the National Transcontinental Railway.

The expenditure on income included the sum of $1,323,367.48 paid as subsidies to railways other than the government roads, also $68,664.29 for the Board of Railway Commissioners for Canada.

The expenditure on the Intercolonial Railway, including the Windsor branch, $15,425.32, charged against revenue, was $7,551,806.41, namely, on capital account $1,506,209.26, and on revenue account $6,045,597.15.

The expenditure on the Prince Edward Island Railway was $374,859.02, of which $91,710.52 was on capital and $283,148.50 on revenue account.

The expenditure on canals aggregates $1,835,061.27, of which $887,838.61 was chargeable to capital, $264,110.73 to income, $383,845.74 for staff, and $299,266.19 for repairs, the last two items being charged to revenue.

Adding to the above the further sum of $34,183.75 for general expenditures common to both branches, the total departmental expenditure for railways and canals for the nine months ended on March 31, 1907, amounted to $16,787,843.94.

The total revenue derived from the government works for the nine months was $6,354,955.71, namely, from railways $6,248,311, and from canals $106,644.71, of which the sum of $92,310.51 was derived from hydraulic and other rents.

By Orders in Council of April 27 and May 19, 1903, tolls for passage through any of the government canals were abolished ; the exemption, which was by way of experiment, to continue in force for the two seasons of navigation of 1903 and 1904, only. A further order of February 25, 1905, continued the exemption for the season of 1905, and by an order of June 22, 1905, the system of toll collection was definitely abandoned in respect of any and all the canals of the Dominion.

A sufficient staff has, however, been retained to carry on the essential work of recording the traffic through the canals—information which is requisite for the proper knowledge and appreciation of the commercial progress of the country—and for the collection of such other revenues as are derivable from the leasing of the canal lands and water powers, &c.

The total government expenditure on railways prior to and since confederation (July 1, 1867), up to March 31, 1907, amounts, on capital account, to $162,050,456.79, which includes the sum of $25,000,000 granted (from capital) to the Canadian Pacific Railway Company for its main line. In addition, there has been expended from the consolidated fund a total of $167,210,490.44, which includes $35,578,502.54, paid as railway subsidies in addition to the above to the Canadian Pacific Railway; making a total expenditure of $329,260,947.23.* Of this amount the sum of $13,881,460.65 was expended on construction works prior to confederation, on portions of what is now the Intercolonial Railway system.

The total revenue received from the government railways from July 1, 1867, to March 31, 1907, amounts to $118,819,364.19.

The government expenditure on canals prior to and since confederation, July 1, 1867, to March 31, 1907, amounts, on capital account, to $91,734,718.21, of which $20,593,866.13 was expended prior to confederation, and from the consolidated fund to $24,495,624.73, making a total of $116,230,342.94.

The total revenue derived from canals during the same period is $13,620,228.03.

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* This amount does not include the annual payment of $119,700 to the provincial government of Quebec, being interest at the rate of 5 per cent on the sum of $2,394,000 up to 1905 granted by 47 Vic., Ch. 8 (1884), nor the annual payment of $107,730, being interest at the rate of 4½ p. c. since and including 1905, on the said sum of $2,394,000, for the line between Ottawa and Quebec which sum was transferred to the public debt as a liability, and is dealt with by the Finance Department. (See Public Accounts 1893-94, page 10, and 1906, page 79).

The total expenditure on railways and canals up to March 31, 1907, is, as above, $445,491,290.17, to which must be added for general expenditures, embracing both $739,623.50, making a grand total of $446,230,913.67.

The total revenue derived from railways and canals from July 1, 1867, to March 31, 1907, is $132,439,592.22.

Details of the above will be found in statements of the accountant of the department, Part I., pages 3 to 50, inclusive.

GOVERNMENT RAILWAYS IN OPERATION.

The government railways are the Intercolonial, the Windsor Branch (maintained only, and leased for operation), and the Prince Edward Island railway.

Details respecting these railways and their operation will be found in the appendices, Part II., containing reports from the Chief Engineer of the department, the General Manager of government railways and the officials of these roads.

The gross earnings of the government roads for the nine months from July 1, 1906, to March 31, 1907, the close of the new fiscal year, amounted to $6,509,186.49, of which the Intercolonial Railway produced $6,248,311, the Windsor Branch $45,440.52, the Prince Edward Island Railway $215,434.97. The gross working expenses amounted to $6,328,895.65, namely, the Intercolonial Railway $6,030,171.83, the Windsor Branch $15,425.32, and the Prince Edward Island Railway $283,148.50.

The operations of the nine months resulted in a net gain of $180,440.84.

The Intercolonial produced a profit of $218,139.17, the Windsor Branch a profit of $30,015.20, and the Prince Edward Island Railway a loss of $67,713.53.

INTERCOLONIAL RAILWAY.

On March 1, 1898, the operations of the Intercolonial were extended to Montreal by means of leases obtained from the Grand Trunk and Drummond County Railway Companies, making an addition of 169·81 miles to the operation of the government line.

The leasing agreement with the Grand Trunk Railway Company, dated February 1, 1898, was confirmed by the Act 62-63 Vic., chap. 5 (1899). Its term extends for a period of ninety-nine years from March 1, 1898; the annual rental being fixed at $140,000.

Under authority of the Act 62-63 Vic., chap. 6 (1899) the Drummond County Railway from Chaudière to Ste. Rosalie, together with the branch from St. Leonard to Nicolet, was acquired by the Dominion ; conveyance being made by a deed dated November 7, 1899.

On October 1, 1904, the Canada Eastern Railway from Gibson to Loggieville, 123·67 miles, was purchased, and on April 19, 1905, the mortgaged Fredericton and St. Mary's bridge and connected property, 1·33 mile, was surrendered to the govern-

ment. The total mileage of the Intercolonial Railway system in operation on July 1, 1906, was 1,445·92 miles. During the nine months ended on March 31, 1907, there has been an addition to the mileage of 2·70 miles, the extension from Sydney to Sydney Mines, making the total mileage 1,448·62 miles on March 31, 1907. In addition, there are numerous spurs and sidings aggregating 366·46 miles, of which 14·10 miles were constructed during the nine months ended on that date.

The reports of the General Manager, the Chief Engineer, the Comptroller and Treasurer, and other officers of the railway will be found in the appendices hereto, Part II., and very full details are there supplied ,which will be of interest.

CAPITAL ACCOUNT.

During the period of nine months ended on March 31, 1907, there was an addition to the capital account of $1,506,248.26, less a refund of $39 on account of the Rivière Ouelle Branch, or $1,506,209.26, making the total expenditure chargeable to capital on the whole road as amalgamated under the Acts 54-55 Vic., chap. 50 (1891), and 62-63 Vic., chaps. 5 and 6 (1899), together with the acquired Canada Eastern Railway, up to March 31, 1907, $82,744,937.89.

The capital additions during the nine months included (omitting cents), the following more important items : for rolling stock, $343,676; additional sidings and spurs, $32,433; increased accommodation at Halifax, $260,124; at Truro, $83,652; at Pictou, $74,638; for the extension to Sydney Mines, $22,195; for strengthening bridges, $118,272; and for double-tracking parts of the line, $50,751. The application of air-brakes to a further number of freight cars, and the substitution of M.C.B. couplers for the old draw-bar on such cars are amongst the various items of betterment.

REVENUE ACCOUNT.

Under the new account system adopted last year, by which the Intercolonial has been brought into conformity in that respect with the other leading roads of Canada and of the United States—to the great advantage of all concerned, and the better control of expenditures—the statements and classifications furnished by the Comptroller and Treasurer, which appear in the appendices hereto, will be found to furnish a class of information, in summarized form, of very interesting character, and not heretofore available.

The main heads under which expenditures on revenue account are grouped in these statements are the following :—Maintenance of way and structures (10 sub-heads), $1,111,888.68; maintenance of equipment (9 sub-heads), $1,180,521.16; conducting transportation (25 sub-heads), $3,659,097.99, against which are certain items of payments for car service, hire of equipment, and rents for tracks, yards and terminals, aggregating $173,873.16; making the net cost $3,485,224.83; and general expenses (7 sub-heads), $147,537.16, aggregating for the nine months ended on March 31, 1907, $5,925,171.83, adding to which the sum of $105,000, for rental of the leased line into Montreal, the total for the nine months ended on March 31,1907, amounts to $6,030,171.83. The usual comparisons with the expenditures of the previous year are necessarily omitted, in consequence of the change in system.

Items of extraordinary expenditure aggregating $216,364.64 were charged during the nine months to 'maintenance and operation.' The principal of these were the following: angle plates and bolts for 80-lb. rails, $58,560; repairs to Lévis crib-work, $5,604.95; repairs to Point du Chêne wharf, $6,516.71; repairs to West River bridge, $14,554.18; new station at Belmont, to replace one destroyed by fire, $3,375; Grand Trunk joint section expenses, including arrears, $19,667.32; two shunting engines, $36,549.30; Exchequer Court judgment *re* fire claim of H. M. Price, $55,856, and various legal expenses, aggregating $9,289.40.

The gross earnings for the nine months aggregated $6,248,311, leaving a balance of earnings in excess of expenditure of $218,139.17.

The passenger earnings amounted to $1,952,438.88, or 31·25 per cent of the gross earnings; the freight earnings to $4,032,745, or 64·54 per cent of the gross; the mail and express to $235,039.88, or 3·76 per cent of the gross, and the miscellaneous to $28,087.24, or 0·45 per cent of the gross earnings.

The total engine mileage was 6,810,418 miles; the total train mileage 5,069,575 miles, and the total car mileage 61,236,603 miles.

The gross earnings per mile of railway (1,448·62 miles) were $4,313.29; per engine mile 91·75 cents; per train mile $1.23 and per car mile 10·20 cents.

The expenses per mile of railway were as follows:—'Maintenance of way and structures,' $767.65; 'Maintenance of equipment,' $814.93; 'Conducting transportation,' $2,405.89; 'General expenses,' $101.85; 'Rental of leased lines,' $72.48.

The expenses per train mile under the above headings were as follows: 'Maintenance of way and structures,' 21·94 cents; 'Maintenance of equipment,' 23·29 cents; 'Conducting transportation,' 68·75 cents; 'General expenses,' 2·91 cents, and 'Rental of leased lines,' 2·07 cents, making a total of 118·96.

Amongst the 10 items of details of cost of 'Maintenance of way and works,' the most important are the following per train mile:—Repairs of roadway, 14·29 cents; renewal of ties 2.92 cents; repairs and renewals of buildings and fixtures, 1·98 cents; and repairs and renewals of bridges and culverts, 1·24 cents

Amongst the 9 items of details of cost of 'Maintenance of equipment,' per train mile are: 'Repairs and renewals of locomotives,' 9·39 cents; 'of passenger cars,' 3·29 cent; 'of freight cars,' 6·46 cents.

The 25 divisions of cost of conducting transportation include the following, per train mile: 'Engine and roundhouse men,' 11·92 cents; 'fuel for locomotives,' 22·55 cents; 'train service,' 9·94 cents; 'station service,' 8·39 cents; 'switchmen, flagmen and watchmen,' 3·28 cents; 'loss and damage,' 1·66 cents; 'injuries to persons,' ·05 cent; 'advertising,' ·62 cent.

Under the head of 'General Expenses,' 7 divisions, the cost, per train mile was: for 'Salaries of general officers,' ·22 cent; 'Salaries of clerks and attendants,' 1·15 cent; 'General office expenses and supplies,' ·30 cent; 'law expenses,' ·32 cent.

The proportion of the gross earnings expended on the several main groups of expenditure, respectively, was as follows:—Maintenance of way and structures, $17.80 per cent; of maintenance of equipment $18.89 per cent; conducting transportation, $55.78 per cent; general expenses, $2.36, and rental of leased line $1.68 per cent; making a total of $96.51 per cent, the balance, $3.49 per cent being profit.

The following was the position of the rolling stock of the railway on March 31, 1907 :—Total locomotives, 370; total cars, 11,385; comprising sleeping cars, first-class, 41; second-class, 40; parlour cars, 9; dining cars, 9; passenger cars, first-class, 137; second-class, 97; postal and smoking cars, 36; express and baggage cars, 60; air-brake and instruction car, 1; box cars, 5,996; refrigerator cars, 109; platform cars, 2,780; pulpwood cars, 50; oil tank cars, 25; hopper cars, 1,114; gondola coal cars, 17; coal cars (20-ton capacity), 471; stock cars, 123; auxiliary and tool cars, 21; convertible dump cars, 130; and vans, 119. In addition, there were 53 snow-ploughs, 20 wing ploughs, 25 flangers, 2 rotary steam ploughs, 2 double-track ploughs, 8 steam cranes and 2 ballast plough cars.

Eight locomotives were condemned during the nine months: 23 were purchased on capital account, and 2 from revenue.

The total number of locomotives—as was explained in some detail in my report last year—included a number no longer suitable to the heavy traffic requirements of the present day. In my next report, I propose to show the tractive power of the old stock and that of the new. It may be accepted as a fundamental principle that it is the duty of the railway to keep up, out of of its earnings, the tractive power originally supplied from capital; but it does not necessarily follow that the actual number of engines should be so maintained. It is the capacity for hauling that governs, not the mere numerical equivalent. The same remark applies, in its essence, to the car stock. It is the capacity of the car—so greatly increased in the present day—that is the index to the potential ability of the railway to meet the requirements of traffic.

The value of stores on hand on March 31, 1907, including fuel, roadway and bridge material and miscellaneous stores was $1,341,996.90.

GENERAL OBSERVATIONS.

The following details, showing the principal items of the traffic of the railway during the nine months ended on March 31, 1907, will be found of interest.

The number of passengers carried was 2,044,847, of which number 191,721 were through passengers. The freight traffic aggregated 2,606,073 tons. The local freight amounted to 1,996,869 tons, and the through freight to 609,204 tons.

The following shows the principal goods carried and their quantities :—

Of flour, 1,531,140 barrels; of grain, 2,231,864 bushels; of lumber, 452,602,703 superficial feet; of live stock, 97,381 head; of coal, 635,480 tons; of manufactured goods, 658,850 tons; of firewood, 67,563 tons, of other articles, 398,348 tons.

Details of works executed, and financial and other statements from the officers of the road will be found in the appendices, Part II.

The work of rebuilding the railway workshops at Moncton, destroyed by fire on February 24, 1906, is making excellent progress, and, disastrous as the immediate effects of the fire were, it will be found on completion of the new buildings and of the new system of yard arrangement now contemplated that the final result will be greatly to the advantage of the railway, and will actually produce a saving of expenditure more than sufficient, within a reasonable time, to cover the cost now involved, apart from the greater facility for operation afforded. The buildings will be brought thoroughly up to date in all respects, and the machinery and fittings will be of the most satisfactory character; placing the railway in a position as regards this main point of its operations, equal to the most advanced roads on this continent.

It is desirable that I should draw attention to the fact that, last year and for several previous years, the Intercolonial railway has supplied special train service for the transport of European mails, and this without adequate compensation. It is true that the country at large reaps the advantage of this service, which, of course, would not have to be performed were it not for the requirements of the postal accommodation: the burden of the expense is, however, placed on the Intercolonial railway, the additional cost entailed, and which naturally figured in the total expenditure of the railway, amounting to about $50,000 a year. Not only is the railway debited with this amount, but at the same time, it is debarred from placing a like sum to its credit for the service—thus making a total of $100,000 a year as the actual loss in supplying the service and the loss of earnings fairly due for that service. I am strongly of the opinion that, at all events for the future, the Post Office Department should defray the cost, as an item which it would certainly have to meet were the Intercolonial a private instead of a national road.

The present position is an unfair one to the balance sheets both of the railway and of the Post Office Department.

WINDSOR BRANCH.

The road is 32 miles in length. It extends from Windsor Junction, on the Intercolonial railway, to Windsor.

The railway is operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company. The company pay all charges in connection with the working of the traffic, two-thirds of the gross earnings being allowed them, the government taking the remaining one-third, and assuming all costs of maintenance of the road and works. This arrangement is carried out under an agreement dated December 13, 1892, which extends, for a further term of twenty-one years, arrangements similar to those made in 1871.

All charges for superintendence and supervision of maintenance of work are borne by the government; the duty of supervision is performed by the chief officers of the Intercolonial railway.

The gross earnings of the government (one-third of the gross receipts) for the nine months ended on March 31, 1907, the new closing date of the fiscal year, amounted to $45,440.52. The expenses of maintenance amounted to $15,425.32, leaving the net profit to the government $30,015.20.

All necessary repairs and renewals have been carried out, and the road is in good order.

PRINCE EDWARD ISLAND RAILWAY.

During the fiscal year 1905-06 the mileage of the railway was increased by the opening of the branch from Charlottetown to Murray Harbour, including the Vernon River Branch between Lake Verde and Vernon, in all 52·3 miles, making the total length of this railway system 261·3 miles, up to June 30, 1906. During the fiscal period of nine months up to March 31, 1907, the Montague Branch from Montague Junction to Montague, 6·2 miles, was opened for traffic, making the total mileage 267·5 miles.

CAPITAL ACCOUNT.

The total cost of the road and its equipment chargeable to capital account on March 31, 1907, was $7,307,299.21, there having been an addition of $91,710.52 during the previous nine months.

The chief item of this expenditure was the sum of $70,316 for increased accommodation at Charlottetown.

REVENUE ACCOUNT.

For the nine months ended on March 31, 1907, the gross earnings amounted to $215,434.97, and the working expenses to $283,148.50. The expenditure was in excess of the earnings to the extent of $67,713.53.

The number of passengers carried was 232,371, producing $97,750.52. Of freight, 67,144 tons were carried, producing $98,657.07. The earnings from mails and sundries amounted to $19,027.38.

The engine mileage was 344,050 miles; the train mileage was 252,292 miles, and the car mileage 1,463,186 miles.

The working expenses per train mile were 112·23 cents, and per mile of railway $1,060.48.

The receipts per mile of railway amounted to $806.87.

The value of stores on hand on March 31, 1907, including fuel and steel rails, was $66,801.31.

Details will be found in the appendices, Part II.

BOARD OF RAILWAY COMMISSIONERS FOR CANADA.

By the Act 3 Ed. VII., chap. 58 (1903) amending and consolidating the law respecting railways, the Railway Committee of the Privy Council was abolished and in lieu thereof a Board of Commissioners, under the above title, was created, to consist of three members to be appointed by the Governor in Council; this Act was brought into force on February 1, 1904, by proclamation, on the authority of an Order in Council, dated January 18, 1904, which also appointed certain persons as commis-

sioners. The office of the board is at Ottawa, though it is authorized to hold sessions in any part of Canada. Its decisions and orders are final, subject to appeal to the Supreme Court upon questions of jurisdiction or law, and also to action thereon by the Governor in Council, in his discretion.

NATIONAL TRANSCONTINENTAL RAILWAY.

Under an agreement, dated July 29, 1903, ratified by the Dominion Act of that year, chap. 71, and under a modifying agreement dated February 18, 1904, ratified by the Act of that year, chap. 24, the Grand Trunk Pacific Railway Company, a company incorporated by the Act of 1903, chap. 122, have agreed with His Majesty in respect of the construction of a line of railway, wholly upon Canadian territory, between the city of Moncton, in the province of New Brunswick, and the navigable waters of the Pacific ocean, at or near Port Simpson or some other port in British Columbia, as may be agreed upon. The railway is to be composed of two divisions, namely, the eastern division, between Moncton and Quebec, thence westerly through the northern part of the provinces of Quebec and Ontario, and through the province of Manitoba to the city of Winnipeg, and the western division, between Winnipeg, or some point on the said eastern division, and the Pacific ocean. The eastern division is to be constructed by the government under four commissioners appointed by the Governor in Council, and thereafter leased to and maintained and operated by the company, who undertake to construct at their own cost and to maintain and operate the western division. The lease of the eastern division is to be for a period of 50 years, at a rental of three per cent per annum upon the cost of its construction; the first seven years of the term to be free of rent; both divisions are to be equipped by the company, the first equipment to be of a value not less than $20,000,000.

By way of assistance to the company in the construction of the western division, it is provided that the government shall guarantee payment of the principal and interest of an issue of bonds to be made by the company for an amount sufficient to produce a sum equal to 75 per cent of the cost of its construction, such amount not to exceed $13,000 per mile in respect of the prairie section from Winnipeg to the eastern limit of the Rocky mountains (such limit to be established by the Chief Engineer of the company and the Chief Engineer of the government, as the result of actual surveys to be made).

The several expenditures to be made under these Acts and agreements are to be so made from appropriations by parliament for the purpose, and on the recommendation of the Minister of Railways and Canals, to whom accounts of all receipts, expenditures and liabilities are to be furnished monthly. The board are required to furnish annually a report to the Governor in Council, through the Minister of Railways and Canals, showing the receipts and expenditures of the year, and other information as to the railway, which report is to be submitted to parliament.

The Board of Commissioners was duly appointed by Order in Council, together with the necessary officers, and is established with its headquarters in the city of Ottawa.

The report of the board for the fiscal period of nine months ended March 31, 1907, has been received, and will be laid before parliament in due course.

It may, however, be desirable to briefly summarize here the results of operations carried on.

The total expenditure by the board amounted for the fiscal period to $5,537,867.50.

The previous expenditure amounted to $2,609,627.13, making the total expenditure up to March 31, 1907, $8,147,494.63.

From the report of the board it appears that the various surveys carried on have produced satisfactory results, and that the basal intention that the railway, throughout, should be so located as to afford grades of exceptional ease in operation not exceeding 0·40 per 100 against east bound and 0·60 per 100 against west bound traffic and curves of the greatest possible radius has been closely regarded, though the endeavour to meet this requirement has, of course, entailed much additional survey work.

Connected lines of survey have now been obtained for the entire distance between Moncton and Winnipeg.

Contracts for construction have been awarded for 852 miles. For fuller information see report of the Commissioners Transcontinental railway.

On the Western Division of the railway to be built by the Grand Trunk Pacific Railway Company, the report of the Government Chief Engineer, Mr. Collingwood Schreiber, C.M.G., dated May 15, 1907, shows the position to be as follows, up to March 31, 1907 :—

The surveys of the line have been completed and the plans and profiles of location have been approved by Orders in Council from a point about 32 miles west from Winnipeg to Edmonton. From Edmonton to a point 27 miles west of the Yellowhead Pass the location plans and profiles have been approved ; but may be revised as improvements develop. The balance of the line to Prince Rupert, the proposed terminus on the Pacific coast, has been located, and plans and profiles submitted ; but an improved revision was expected. The Chief Engineer states that a very good location has been made, only one grade exceeding four-tenths of one per cent ; the exception being a one per cent grade for a distance of about 20 miles. The work, for mountainous work, will not be heavy, except for the distance of about 170 miles east from Prince Rupert, where it will be almost entirely very heavy rock excavation.

The construction work under contract and progress is from Portage la Prairie, 275 miles westward, on which about 75 per cent of the grading was done, and about 60 per cent of the culverts, bridges, &c.; a further distance of 141 miles to a point a short distance west of the crossing of the South Saskatchewan river, on which 48 per cent of the grading and about 38 per cent of the entire work was done. For a further distance of about 316 miles to Edmonton about 25 per cent of the grading was done. The bridges over the River Assiniboine, the south and north Saskatchewan rivers,

and the Battle river are under contract. The severity of the last winter has greatly interfered with the work of construction. With regard to track laying the Chief Engineer reports that though steel rails of 80 lbs. to the yard have been delivered for the whole distance, from Winnipeg to Edmonton, 800 miles, the shortage of ties has delayed tracklaying; only 36 miles of track being laid up to March 31, 1907. About 36 miles of telegraph had been erected. This report of Mr. Schreiber will be found in the appendices.

RAILWAY SUBSIDIES.

The following pages show, in alphabetical sequence, the position of those companies whose dealings with the government in respect of subsidies are not yet closed. Reports of previous years give information as to companies whose subsidies have been fully earned and paid prior to July 1, 1906.

A tabulated statement of payments will be found in Part I., and a list of subsidy agreements entered into during the fiscal year in Part IV.

The several subsidy Acts passed in each year from 1882 will be found in Part III. No subsidies were authorized in the session of 1895, 1896, 1898, 1902 and 1905.

Information has been brought down to the end of the fiscal period 1906-07, March 31, 1907.

SUBSIDY CONTRACTS ENTERED INTO DURING 1906-07, TO MARCH 31, 1907.

Bay of Quinté Railway Company.—From Tweed to Bannockburn, 20 miles; contract dated October 31, 1906.

Halifax and South-Western Railway Company.—From a point near Halifax to a point at or near Barrington Passage, 185 miles contract, dated October 8, 1906.

Napierville Junction Railway Company.—From St. Constant to a point at or near the international boundary on the Delaware and Hudson railroad, 28 miles; contract dated October 10, 1906.

Quebec Central Railway Company.—From St. Francis to St. George, 9 miles; contract dated January 28, 1907.

Quebec and Lake St. John Railway Company.—From Roberval to the Government wharf at Lake St. John, 1 mile; contract dated November 24, 1906.

York and Carleton Railway Company.—From its present terminus westerly, 5 miles; contract dated August 20, 1906.

SUBSIDIES PAID DURING FISCAL YEAR ENDED MARCH 31, 1907.

Atlantic and North-west Railway		$ 186,600 00
Bay of Quinté Railway		72,602 45
Brockville, Westport and Sault Ste. Marie Railway		35,600 00
Canadian Pacific Railway (Staynerville Branch)		9,600 00
Chateauguay and Northern Railway, 36·51 miles		84,224 75
Halifax and South-Western Railway		268,107 20
International Railway Company of New Brunswick (formerly Restigouche and Western Railway)		51,200 00
James Bay Railway		420,608 00
Klondike Mines Railway		96,000 00
Middleton and Victoria Beach Ry., 39·30 miles		27,667 20
Midland Railway Company, Limited		4,967 70
Quebec and Lake St. John Ry., 35 miles	$64,512	
1 mile	3,200	
		67,712 00
		$1,324,889 30

Less refunds in connection with subsidy payments to Atlantic and Lake Superior Railway Company :—

On account of duplicate claims	$ 283 02	
On account of claims not paid (cheques returned)	1,238 80	
		1,521 82
		$1,323,367 48

GOVERNMENT ACTION AS TO SUBSIDIZED RAILWAYS.

(The numbers within brackets after title of the company refer to the lists of railways for which subsidies have been authorized by Parliament year by year, from the commencement of the system of railway subsidies in 1882, in the appendices hereto.)

With regard to the several lines of railway subsidized by the Dominion, the following represents the action taken and the progress made, in so far as the Dominion government is concerned; only those lines and companies being mentioned as to which definite steps, other than merely preliminary, have been taken towards securing the subsidy.

It has to be noted that by the Act 6 Edward VII., chap. 12 (1906), the termination of the fiscal year has been changed from June 30 to March 31 in each year, such change taking effect on and after July 1, 1906, except that the fiscal period 1906-07 shall consist of nine months only, beginning on the said July 1, 1906, and ending on March 31, 1907.

The following shows the aggregate of the payments made on subsidy accounts :—

For the fiscal year	1883-84,	ended on June 30,	1884..	$ 208,000 00
"	1884-85	"	1885..	403,245 00
"	1885-86	"	1886..	2,171,249 00
"	1886-87	"	1887..	1,406,533 00
"	1887-88	"	1888..	1,027,041 92
"	1888-89	"	1889..	846,721 83
"	1889-90	"	1890..	1,678,195 72*
"	1890-91	"	1891..	1,265,705 87*
"	1891-92	"	1892..	1,248,215 93*
"	1892-93	"	1893..	811,394 07*
"	1893-94	"	1894..	1,229,885 10*
"	1894-95	"	1895..	1,310,549 10*
"	1895-96	"	1896..	834,745 49*
"	1896-97	"	1897..	416,955 30*
"	1897-98	"	1898..	1,414,934 78*
"	1898-99	"	1899..	3,201,220 05*
"	1899-1900	"	1900..	725,720 35*
"	1900-01	"	1901..	2,512,328 86*
"	1901-02	"	1902..	2,093,939 00*
"	1902-03	"	1903..	1,463,222 34*
"	1903-04	"	1904..	2,046,878 45*
"	1904-05	"	1905..	1,275,629 53*
"	1905 06	"	1906..	1,637,574 37*
"	1906-07	ended on Mar. 31,	1907..	1,323,367 48*
				$32,553,252 54

To the above there have to be added the following exceptional subsidies :—

The Canada Central Railway, paid between 1878-83..	$ 1,525,250 00
The Canada Pacific Railway extension from St. Martin's Junction to Quebec, paid in 1885.. ..	1,500,000 00
Total subsidies paid from 'Consolidated Fund' up to June 30, 1906....	$35,578,502 54
The main line subsidy to the Canadian Pacific Railway was paid from 'Capital,' amounting to.. ..	25,000,000 00
Total paid as subsidies..	$60,578,502 54

The above does not include the amount $2,394,000, due to the province of Quebec for the railway betwen Ottawa and Quebec, which amount has been transferred to

* In these amounts the subsidy of $186,600 a year payable to the Atlantic and North-west Railway Company, for 20 years from July 1, 1889 is included. Payment is made by the Finance Department.

the public debt, and on which interest at 5 per cent was paid, amounting to $119,700 a year, under the Act of 1884, chap. 8, up to 1905, and at 4½ per cent, amounting to $107,730 a year, since and including that year.

NOTE.—The names, locations and mileage of the several railways of the Dominion, together with those of the branch lines composing their systems will be found in the 'Railway Statistics,' now issued as a separate report.

ALBERTA SOUTHERN RAILWAY COMPANY.

(See Annual Report of 1891-92.)

ALGOMA CENTRAL AND HUDSON BAY RAILWAY COMPANY

(See Annual Report of 1905-06.)

ATLANTIC AND LAKE SUPERIOR RAILWAY COMPANY.

(See Annual Report of 1905-06.)

ATLANTIC AND NORTH-WEST RAILWAY COMPANY.

(Leased to the Canadian Pacific Railway Company.)

(See Annual Report of 1889-1890.)

The full history of this subsidy was shown in the annual report for 1889-90. The company receives an annual subsidy of $186,600 for 20 years. The first payment having been made in 1889-90. The total paid up to March 31, 1907, is $3,358,800. Payment is made by the Department of Finance direct.

ATLANTIC, QUEBEC AND WESTERN RAILWAY COMPANY.

(See No. 595.)

This company was incorporated by the Act of Quebec, 1 Ed. VII., (1901), chap. 63, with powers to construct a railway from Gaspé Basin to some point north of Causapscal, but not beyond Sayabec, in the county of Matane. Other powers were granted of a general commercial character.

By the Dominion Act, 3 Ed. VII., chap. 81 (1903), the above company was declared to be for the general advantage of Canada, and authority was granted to them, in addition to that conferred by their Act of incorporation, to construct a railway from a point north of Causapscal on the Intercolonial Railway, to a point at or near Edmundston, N.B.

By the Dominion Subsidy Act, 3 Ed. VII. (1903), chap. 57, item 51, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a railway from Gaspé to a point at or near Causapscal on the Intercolonial Railway, and from that point to Edmundston, not exceeding 260 miles; and for a railway from Paspebiac to Gaspé, not exceeding 102 miles.

The company having applied for the subsidy granted for the line from Paspebiac to Gaspé, a contract was entered into with them, accordingly, on February 25, 1905, under authority of order in council, dated January 28, 1905.

No payments have been made up to March 31, 1907.

BAIE DES CHALEURS RAILWAY COMPANY.

(See Annual Report of 1895-96.)

(See also Atlantic and Lake Superior Railway Company.

THE BAY OF QUINTÉ RAILWAY COMPANY.

(See Nos. 434, 581 and 661.)

This company was incorporated by the Dominion Act of 1881, chap. 46, under the name 'The Bay of Quinté Railway and Navigation Company,' with powers to construct a line of railway from Mill Point, county of Hastings, on the Bay of Quinté, to a point of junction with the Grand Trunk Railway.

By the Act of 1896 it was empowered to amalgamate with the Kingston, Napanee and Western Railway Company (formerly the Napanee, Tamworth and Quebec Railway Company), under the name of the Bay of Quinté Railway Company. Its powers were extended to cover the construction of branch lines, not exceeding 20 miles in length, each to connect with mines and mineral lands, and by the Act of 1900, chap. 50, extensive powers were conferred for development of electrical power, and for mining and timber industries. Their powers of construction were extended to June 14, 1905.

By the Subsidy Act of 1899, chap. 7, item 20, as amended by clause 9 of the Subsidy Act of 1900, chap. 8, the grant of aid was authorized to the extent of $3,200 per mile for 10 miles, for extensions, branches and additions to connect their lines of railway or to connect the said lines or connecting lines with iron or other mines or mineral or wood lands in certain counties named. This was in lieu of part of the balance of subsidy granted to the Kingston, Napanee and Western Railway in 1892.

Under date of December 30, 1902, a subsidy contract was entered into with them accordingly.

By the Subsidy Act of 1899, chap. 7, item 45, the grant of aid to the extent of $3,200 per mile with an addition of 50 per cent on average expenditure in excess of $15,000 per mile, the whole not exceeding $6,400 per mile, was authorized for an extension not exceeding 2 miles, of the company's line, westerly, from a point at or near Richmond Boundary Road, near Deseronto, and also for an extension from the end of the said two miles, northerly, for a distance not exceeding 3 miles.

Under date of December 30, 1903, a separate contract was entered into with the company for each of these two sections.

During the fiscal year 1902-03 payment was made of $19,200 for the six miles between Deseronto and Napanee, under the subsidy granted by item 20 of the Act of 1899.

By the Subsidy Act of 1903, chap. 57, item 37, the grant of aid to the extent of $3,200 per mile with an addition of 50 per cent on the average expenditure in excess of $15,000 per mile, the whole not exceeding $6,400 per mile, was authorized for further extension of the company's line of railway, from the northern terminus thereof, commencing from a point at or near Actinolite, thence in a north-westerly direction via the villages of Queensborough and Bannockburn, to a point in the township of Marmora or Lake in Hastings county, not exceeding 20 miles in all.

Under date of January 23, 1904, a subsidy contract was entered into with the company for the construction of this extension.

By the Railway Subsidy Act, 6 Edward VII. (1906), chap. 43, item 23, the subsidy granted by chap. 7 of 1899, section 2, item 45, in part, and the subsidy granted by chapter 57 of 1903, section 2, item 37, 20 miles of railway, were revoted.

The company were admitted to contract on October 8, 1906, under authority of an order in council, dated September 21, 1906, the time for completion being fixed as by August 1, 1907.

This extension of the railway is completed, and during the nine months between June 30, 1906, and March 31, 1907, the subsidy, $72,602.45, has been paid.

The total payments to this company on subsidy account amounted to $69,120, up to June 30, 1904; but there had been previously paid to the Kingston, Napanee and Western Railway Company a total of $208,732.80.

BEAUHARNOIS JUNCTION RAILWAY COMPANY.

(Operated by New York Central Railroad.)

(See Annual Report of 1895-96.)

BEERSVILLE COAL AND RAILWAY COMPANY.

(See Annual Report of 1905-06.)

BELLEVILLE AND NORTH HASTINGS RAILWAY COMPANY.

(Now part of Grand Trunk Railway System.)

(See Annual Report of 1888-89.)

BOSTON AND NOVA SCOTIA COAL COMPANY.

(See Inverness and Richmond Railway Company.)

(See Annual Report of 1895-96.)

BRACEBRIDGE AND TRADING LAKE RAILWAY COMPANY.

(See Annual Report of 1905-06.)

BROCKVILLE, WESTPORT AND SAULT STE. MARIE RAILWAY COMPANY.

(See No. 670.)

The history of this railway was given in the annual report for 1896-97, with a statement of the subsidies paid up to the close of the year 1891-92.

By the Railway Subsidy Act, 6 Edward VII. (1906), chap. 43, item 32, the balance remaining unpaid of the subsidy granted by chapter 3 of 1889, not exceeding $3,200 per mile, and also the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, which was regranted by chapter 5 of 1892; the whole not exceeding $86,800, being a revote of the subsidy granted by chap. 4 of 1894, and that the said subsidy or so much thereof as has heretofore been agreed upon by the terms of an agreement filed in the Department of Railways and Canals between said Brockville, Westport and Sault Ste. Marie Railway Company and the creditors of said railway company, to be paid over to the said creditors or the legal representatives of said creditors as mentioned in said agreement.

By an order in council, dated December 8, 1906, authority was given for payment to the creditors of the company, through commissioners therein named, the said balances of subsidy.

During the nine months between June 30, 1906, and March 31, 1907, the balance of subsidy due, $35,600, has been paid, making the total payments to the company up to March 31, 1907, $140,800.

BRANTFORD, WATERLOO AND LAKE ERIE RAILWAY COMPANY.

(Now part of Toronto, Hamilton and Buffalo Railway.)

(See Annual Report of 1895-96.)

BRUCE MINES AND ALGOMA RAILWAY COMPANY.

(See Annual Report of 1904-05.)

BUCTOUCHE AND MONCTON RAILWAY COMPANY.

(See Annual Report of 1893-94.)

CALGARY AND EDMONTON RAILWAY COMPANY.

(See Annual Report for 1890.)

(Leased to Canadian Pacific Railway.)

CANADA ATLANTIC RAILWAY COMPANY.

(Now part of Grand Trunk Railway System.)

(See Annual Report of 1888-89; also see under head of Ottawa, Arnprior and Parry Sound Railway Company.)

CANADA EASTERN RAILWAY COMPANY (FORMERLY NORTHERN AND WESTERN RAILWAY COMPANY OF NEW BRUNSWICK, NOW PART OF THE INTERCOLONIAL SYSTEM.)

(See the Annual Reports for the years 1894-95 and 1899-1900.)

CANADIAN BRIDGE COMPANY.

(See South Shore Railway Company, Quebec.)

CANADIAN NORTHERN RAILWAY COMPANY.

(See Nos. 446,493.)

By the Dominion Act 62-63 Vic., chap. 57 (1889), authority was granted for the amalgamation of the Winnipeg Great Northern Railway Company (formerly the Winnipeg and Hudson's Bay Railway and Steamship Company, the name of which was by the Act of 1887, chap. 81, changed to the Winnipeg and Hudson's Bay Railway Company), and the Lake Manitoba Railway and Canal Company, under the name of the Canadian Northern Railway Company, and the agreement for such amalgamation was confirmed; authority also was given for the construction of a railway from Prince Albert to Edmonton, also a branch from a point on that line to the Peace river, together with certain other branch lines.

The Dominion Act 1 Ed. VII., chap. 52 (1901), confirmed certain agreements for amalgamation of the Manitoba and South-Eastern Railway Company and the Ontario and Rainy River Railway Company with the above company; it also granted authority to construct certain lines or railway described.

By the Dominion Act 1 Ed. VII., chap. 53 (1901), authority was granted to the above company, to lease, with the option of purchase the Northern Pacific and Manitoba Railway, the Winnipeg Transfer Railway Company, Limited, the Portage and North-Western Railway Company, and the Waskada and North-Eastern Railway Company.

By the Dominion Subsidy Act 62-63 Vic. (1889), chap. 7, item 32, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for 100 miles of railway from a point on the Winnipeg Great Northern Railway north of Swan river to Prince Albert, N.W.T.

By the Dominion Subsidy Act 63-64 Vic. (1900), chap. 8, item 18, the grant of a similar subsidy for 100 miles of railway in further extension of the company's line from north of Swan river towards Prince Albert, was authorized.

The company having applied, they were admitted to contract under both subsidies, the two agreements being dated December 7, 1903.

The payments made to this company under the aforesaid agreements aggregate the following amounts :—

For the Ontario and Rainy River Railway (see the Annual Report for 1902-03), $1,534,976, all paid prior to June 30, 1903.

For the Prince Albert Branch, $374,156.

The total of the above payments amounts to $1,909,132, up to June 30, 1904.

By the Special Act 3 Ed. VII., chap. 7 (1903), assistance was granted for the extension of the company's railway for 620 miles from Grandview, the terminus of their Gilbert Plains branch to Edmonton, and for a distance of 100 miles east of Prince Albert to Prince Albert, by guaranteeing the principal and interest at 3 per cent per annuam of first mortgage bonds and other securities to the extent of $13,000 a mile, the principal to be payable in 50 years from the passage of the Act.

Under date July 29, 1903, a trust mortgage between the Canadian Northern Railway Company, the British Empire Trust Company, Limited, the National Trust Company, Limited, and His Majesty, was executed in pursuance of the provisions of the said Act, the security to be held by the trustees to be a charge on the two lines of railway thereunder to be constructed, with their equipment, buildings and appurtenances, on the balance of the Prince Albert Branch east of Erwood, and on the company's already constructed and operated lines from Port Arthur westwards as enumerated in a schedule attached, with their buildings, equipment and appurtenances.

Under the same date, July 29, 1903, an agreement was made with the company for the construction of the said two lines of railway, accordingly, the line from Grandview to Edmonton to be completed by October 1, 1905, and the 100 miles east from Prince Albert by the same date. By an Order in Council of November 3, 1905, the time for completion was extended to October 1, 1906.

Under the authority of orders in council, passed after inspections of the roads in question, payments were made under the said guarantee agreement from the proceeds of the securities deposited with the Receiver General, for that purpose. Such payments, the last of which was made on September 5, 1905, amounting in all to $8,523,-597.43, being the balance of the securities in question, which were thereupon exhausted. The two railways were constructed and open for traffic towards the end of the year 1906.

For certain portions of the company's lines, under the aforesaid amalgamations, land grants have been authorized (see Winnipeg Great Northern Railway Company and Manitoba and South-Eastern Railway Company in annual report for 1895-96.) These matters are dealt with by the Department of the Interior.

The company further, by virtue of this amalgamation, have an agreement with the government for the transport of men, supplies, materials and mails for 20 years over the portion of their line from Gladsone to a point half way to the River Saskatchewan.

CANADIAN PACIFIC RAILWAY COMPANY.

(Revelstoke to Arrow Lake.)

(See Annual Report for 1896-97.)

CANADIAN PACIFIC RAILWAY COMPANY.

(Pipestone Branch—Antler Station to Moose Mountain.)

(See Annual Report for 1901-02.)

CANADIAN PACIFIC RAILWAY COMPANY.

(Crow's Nest Pass Railway.)

(See Annual Report for 1902-03.)

CANADIAN PACIFIC RAILWAY COMPANY.

(Waskada Branch.)

(See Annual Report of 1905-06.)

CANADIAN PACIFIC RAILWAY COMPANY.

(Pheasant Hills Branch.)

(See No. 616.)

By the Subsidy Act of 1903, Ed. VII., chap. 57, item 72, the grant of a subsidy of $3,200 a mile with an addition of 50 per cent on cost in excess of $15,000 a mile, but not exceeding in all $6,400 a mile, was authorized for a railway from a point on the main line of the Canadian Pacific Railway between Moosomin and Elkhorn, northwesterly to a point in the neighbourhood of the Pheasant Hills, not exceeding 136 miles.

The company having applied, a contract was entered into with them on January 14, 1904, under authority of orders in council of November 17, 1903, and January 12, 1904.

During the fiscal year, 1905, subsidy was paid for this work to the extent of $56,576, making the total payments up to June 30, 1905, $435,200.

No further payments have been made up to March 31, 1907.

CANADIAN PACIFIC RAILWAY COMPANY.

(Dyment Branch.)

(See Annual Report for 1902-03.)

CANADIAN PACIFIC RAILWAY COMPANY.

(See No. 593 and 630.)

By the Railway Subsidy Act 3 Ed. VII. (1903), chap. 57, section 2, item 49, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on average cost in excess of $15,000 a mile, but not exceeding in all $6,400 a mile, was authorized for a branch line of railway from a point at or near the intersection of the Canadian Pacific Railway and the Great Northern Railway between St. Philippe d'Argenteuil and Lachute, thence in a northerly direction, passing through the village of Brownsburg, not exceeding three miles.

By the Railway Subsidy Act, 4 Ed. VII. (1904), chap. 34, item 4, the subsidy granted by chap. 57 of 1903, section 2, item 49, 3 miles of railway, was revoted.

This company having applied for the said subsidy, a contract was entered into with them for the work on March 20, 1906, under authority of orders in council, dated November 8, 1905, and February 19, 1906.

During the nine months between June 30, 1906, and March 31, 1907, payment has been made to the extent of $9,600, the total amount to the latter date.

CANADIAN PACIFIC RAILWAY COMPANY.

(West Selkirk—Lake Winnipeg Branch.)

(See Annual Report for 1902-03.)

CAP DE LA MADELEINE RAILWAY COMPANY.

(Leased to Canadian Pacific Railway.)

(See Annual Report of 1896-97.)

CAPE BRETON RAILWAY EXTENSION COMPANY, LIMITED.

(See Annual Reports of 1895-96 and 1905-06.)

CENTRAL COUNTIES RAILWAY COMPANY.

(See Annual Report of 1905-06.)

CENTRAL ONTARIO RAILWAY COMPANY.

(See Annual Report for 1900-01.)

(See No. 547.)

The history of this railway was given in the annual report for 1900-01, with a statement of the subsidies paid for the then completed line of railway.

By the Railway Subsidy Act, 3 Ed. VII. (1903), chap. 57, section 2, item 4, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on average cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for a further extension of the company's railway from a point at or near Bancroft to a point on the Canada Atlantic Railway at or near Whitney, not exceeding 40 miles, in lieu of subsidies granted by item 5 of section 2 of chapter 8 of 1900, and item 16 of section 2 of chapter 7 of 1901, respectively.

The company having applied for this subsidy a contract was entered into with them accordingly on September 6, 1905, under authority of an order in council, dated July 22, 1905; the road to be completed by August 1, 1907.

No payments have been made up to March 31, 1907.

CENTRAL RAILWAY RAILWAY COMPANY OF NEW BRUNSWICK.

(See Annual Report for 1902-03.)

CHATEAUGUAY AND NORTHERN RAILWAY RAILWAY COMPANY.

(See Nos 507, 508, 509, 599 and 631.)

This company was incorporated by the Quebec Act of 1895 (1), chap. 64, its powers of construction being modified by the Act, chap. 75 of 1896.

By the Dominion Subsidy Act of 1900, 63-64 Vic., chap. 8, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for 42 miles of a railway from a point in Hochelaga ward, Montreal, to a point on the Great Northern Railway in or near the town of Joliette, with a spur into the town.

The company were admitted to contract for this work on January 19, 1901.

On the same date they were admitted to contract for two other works, specially subsidized by the same Act, viz., for a railway, vehicular, and foot-passenger bridge from Bout de L'Ile to Charlemagne, at the junction of the Rivers Ottawa and St. Lawrence, $150,000, and for a bridge across the Lac Ouareau river, $15,000. No portion of these three subsidies has been paid up to June 30, 1903.

By the Dominion Subsidy Act of 1903, chap. 57, item 55, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for 16 miles of a railway from a point on its main line at or near L'Epiphanie, via the parish of St. Jacques de l'Achigan to the village of Rawdon.

The company were admitted to contract for this work on December 12, 1903.

By the Dominion Subsidy Act of 1903, chap. 57, sec. 3, subsec. 4, a subsidy was authorized for the Bout de L'Ile bridge of $50,000, in addition to that granted by item 33 of section 2, of chap. 8, of 1900.

The total of the payments made to the company up to June 30, 1904, amounted to $151,595, including $99,000 for bridges.

By the Railway Subsidy Act, 4 Edw. VII. (1904), chap. 24, section 3, the balance remaining unpaid of the subsidy granted by item 33 of section 2 of chapter 8 of 1900, for a single-track standard railway bridge, with two roadways 10 feet wide for free vehicular traffic, the same as upon a public highway, from Bout de L'Ile to Charlemagne at the junction of the Ottawa and St. Lawrence rivers, a sum not exceeding $51,000 was authorized.

The company were admitted to contract for this work on November 12, 1904, under authority of an order in council dated September 26, 1904.

The two bridges, subsidized as above, are completed, and during the past fiscal year the full amount of the subsidies, $116,000, has been paid, making the total payments for these works $215,000.

By the Railway Subsidy Act, 4 Edw. VII. (1904), chap. 34, section 2, item 5, the subsidy granted by chapter 8 of 1900, section 2, item 32, 42 miles of railway, was revoted.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on June 26, 1906, under authority of an order in council dated February 16, 1906.

During the nine months between June 30, 1906, and March 31, 1907, payments have been made to the extent of $84,224.75, making the total payments up to the latter date, exclusive of bridges, $136,819.75.

CHATHAM BRANCH RAILWAY COMPANY.

(Now part of Intercolonial Railway.)

(See Annual Report of 1893-94.)

CHIGNECTO MARINE TRANSPORT COMPANY.

(See Annual Report for 1894-96.)

COAST RAILWAY COMPANY OF NOVA SCOTIA.

(Name changed to Halifax and Yarmouth Railway Company by Nova Scotia Statute of 1899, chap. 128.)

(See Annual Report of 1904-05.)

COMPAGNIE DU CHEMIN DE FER DE COLONIZATION DU NORD.

(See Annual Report of 1905-06.)

COBOURG, NORTHUMBERLAND AND PACIFIC RAILWAY COMPANY.

(See Annual Report for 1900-01.)

COLUMBIA AND KOOTENAY RAILWAY AND NAVIGATION COMPANY.

(Leased to the Canadian Pacific Railway Company.)

(See Annual Report for 1891-92.)

CORNWALLIS VALLEY RAILWAY COMPANY.

(Now part of Dominion Atlantic Railway.)

(See Annual Report for 1891-92.)

CUMBERLAND RAILWAY AND COAL COMPANY.

(See Annual Report for 1894-95.)

DOMINION ATLANTIC RAILWAY COMPANY.

(See Western Counties Railway Company.)

DOMINION EASTERN RAILWAY COMPANY.

(See Annual Report for 1900-01.)

DOMINION LIME COMPANY.

(Now part of Hereford Railway.)

(See Annual Report for 1888-89.)

DOMINION COAL COMPANY.

(Now Sydney and Louisburg Railway.)

(See Annual Report for 1895-96.)

DRUMMOND COUNTY RAILWAY COMPANY.

(Now part of Intercolonial Railway.)

(See Annual Report of 1900-01.)

EAST RICHELIEU VALLEY RAILWAY COMPANY.

(Now part of Quebec Southern Railway.)

(See Annual Report of 1888-89.)

EDMONTON, YUKON AND PACIFIC RAILWAY COMPANY.

(See Nos. 455, 572.)

This company was incorporated by the Dominion Act of 1896, 59 Vic., chap. 71, under the name of the Edmonton District Railway, with powers to construct and operate a railway from some point within the town of Edmonton to a point in South Edmonton on the Calgary and Edmonton Railway and to connect therewith; also from some point within the town of Edmonton, via the village of St. Albert, to a point on the Athabaska river, at or near Fort Assiniboine, with a branch to Stony Plains; also from some point within the town of Edmonton to a point at or near Fort Saskatchewan, together with a branch to a point on Sturgeon river. Other powers were granted of a general commercial character.

By the Dominion Act of 1898, 61 Vic., chap. 63, the company was empowered to extend their line of railway from the Athabaska to the navigable waters of Pelly river.

By the Dominion Act of 1899, 62-63 Vic., chap. 64, the name of the company was changed to the above, with powers to extend the railway via the Yellow Head Pass or the Peace River Pass, to a point in British Columbia, or to connect with the railway which the British Pacific Railway Company is authorized to construct, and also to construct and operate a branch line to some point on the Yukon river.

By the Dominion Subsidy Act of 1903, 3 Edw. VII., chap. 57, item 28, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for 50 miles of a railway from the town of Stratheona to Edmonton, and thence westerly towards the Yellow Head Pass.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on June 24, 1904, the road to be completed by December, 1906.

No payments have been made up to March 31, 1907.

ELGIN, PETITCODIAC AND HAVELOCK RAILWAY COMPANY.

(See Annual Reports for 1885-86 and 1890-91.)

ERIE AND HURON RAILWAY COMPANY.

(Now part of Lake Erie and Detroit River Railway.)

(See Annual Report for 1886-87.)

ESQUIMALT AND NANAIMO RAILWAY COMPANY.

(Now part of Canadian Pacific Railway System.)

(See Annual Report for 1886-87.)

FREDERICTON AND ST. MARY'S BRIDGE COMPANY.

(Now part of Intercolonial Railway.)

(See Annual Report of 1904-05.)

GRAND TRUNK, GEORGIAN BAY AND LAKE ERIE RAILWAY COMPANY.

(Now part of Grand Trunk Railway System.)

(See Annual Report for 1893-94.)

GRAND TRUNK RAILWAY COMPANY.

(See Annual Report of 1900-01.)

GREAT EASTERN RAILWAY COMPANY.

(See Annual Report for 1896-97.)

GREAT NORTHERN RAILWAY OF CANADA (FORMERLY THE GREAT NORTHERN RAILWAY COMPANY.)

(See Annual Report for 1902-03.)

GULF SHORE RAILWAY COMPANY OF NEW BRUNSWICK.

(See Annual Report for 1899-1900.)

GUELPH JUNCTION RAILWAY COMPANY.

(Leased to Canadian Pacific Railway.)

(See Annual Report of 1888-89.)

HALIFAX AND SOUTH-WESTERN RAILWAY COMPANY.

(See Nos. 567, 619 and 660.)

This company was declared to be incorporated under date of the 21st day of August A.D. 1901, by the Act of the province of Nova Scotia, 2 Edward VII., chap.

1 (1902), for the construction and operation of a railway from a point on the Intercolonial Railway at or near Halifax to Barrington Passage, and also from a junction with the Central Railway, at or near New Germany, to Caledonia Corners.

By the Dominion Subsidy Act of 1903, chap. 57, items 23 and 75, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for lines of railway (*a*) from a point at or near Halifax to a point on the Central Railway at or near Mahone Bay, 68 miles; (*b*) from a point on the Central Railway at or near Bridgewater towards Barrington Passage, 77 miles, and an addition to and continuation of the same, 35 miles; (*c*) from a point at or near New Germany on the Central Railway to a point at or near Caledonia, 22 miles; (*d*) and from a point at or near Caledonia to Liverpool, 29 miles.

The company was admitted to contract on November 9, 1903, under authority of an order in council dated November 4, 1903.

The total payments up to June 30, 1906, amounted to $653,776.

By the Railway Subsidy Act, 6 Ed. VII. (1906), chap. 43, item 22, the subsidies granted by chapter 57 of 1903, item 23 (*a*) and (*b*), and item 75, respectively, 185 miles of railway, were revoted.

The company having applied for these subsidies, a contract was entered into with them, accordingly, on October 8, 1906, under authority of an order in council, dated September 21, 1906, the road to be completed by August 1, 1908.

During the nine months between June 30, 1906, and March 31, 1907, payments have been made to the extent of $268,107.20, making the total payments up to March 31, 1907, $921,883.20.

HALIFAX AND YARMOUTH RAILWAY COMPANY.

(Formerly the Coast Railway Company of Nova Scotia, which see.)

(Name changed by Nova Scotia Statute of 1899, Chap. 128.)

(See Annual Report for 1902-03.)

HARVEY BRANCH RAILWAY COMPANY.

(See Annual Report of 1889-90.)

HEREFORD RAILWAY COMPANY (FORMERLY HEREFORD BRANCH RAILWAY COMPANY).

(See Annual Report of 1891-92.)

INTERNATIONAL RAILWAY COMPANY.

(Now part of Canadian Pacific Railway System.)

(See Annual Reports of 1887-88 and 1889-90.)

INTERNATIONAL RAILWAY COMPANY OF NEW BRUNSWICK.

(Formerly the Restigouche and Western Railway Company, which see.)

This company was incorporated by letters patent, dated May 19, 1903, in pursuance of the Act of the legislature of New Brunswick of that year, entitled 'An Act in aid of the construction of certain railways,' with powers to construct a line of railway commencing at the terminus of the first section of 10 miles of railway extending from Campbellton, N.B., westward, built for the Restigouche and Western Railway Company, to the St. John river at a point between Grand Falls and Edmundston, with power to acquire the said 10 miles already built, and to isue debentures on the said line of railway, including the first section of 10 miles, when acquired, to the extent of $5,000 per mile; the capital stock to be $600,000, with provision for increase to $1,500,000.

By the Subsidy Act of 1903, chap, 57, item, 14, authority was given for the grant of a subsidy to the above company for a line of railway from the western end of the 10 miles of its railway already constructed from Campbellton towards a point on the St. John river between Grand Falls and Edmundston, not exceeding 67 miles, being in lieu of previous subsidies.

Under date of May, 13, 1905, a subsidy contract was entered into with the company accordingly, under the authority of an Order in Council of the 8th of that month.

During the nine months between June 30, 1906, and March 31, 1907, payments have been made to the extent of $51.200, the total paid up to the latter date.

INVERNESS RAILWAY AND COAL COMPANY.

(Name changed from Inverness and Richmond Railway Company by the Act of the province of Nova Scotia, 2 Edward VII., chap. 162 of 1902.)

(See Annual Report of 1905-06.)

IRONDALE, BANCROFT AND OTTAWA RAILWAY COMPANY.

(See Annual Report for 1900-01.)

JAMES BAY RAILWAY COMPANY.

See No. 583.)

This company was incorporated by the Dominion Act of 1895, chap. 50, with powers for the construction of a line of railway from Parry Sound, in the province of Ontario, to French river, at or near Doke's Indian reserve, thence in a northerly direction to the easterly side of Lake Wahnapitae, and thence to a point at or near the mouth of Moose river, on James Bay. Other powers of a general commercial character were granted.

By the Act of 1897, chap. 47, an extension of its line of railway was authorized from Parry Sound to the city of Toronto, in addition to the line of railway authorized by the Act incorporating the company. Powers were also given to acquire and utilize water and steam power for the purpose of generating electricity for lighting, heating

and motor purposes in connection with its railway or any branch or part thereof, also to construct and operate telegraph and telephone lines along the whole length of the railway extension and branches. All the provisions of the Act incorporating the company as to the issue of bonds, debentures or other securities, and all the other powers of the company, shall apply to the extension and branch lines authorized.

By the Dominion Subsidy Act, 3 Edward VII. (1903), chap. 57, section 2, item 39, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for a line of railway from Toronto, via the east side of Lake Simcoe, to a point at, near, or beyond Sudbury, through Parry Sound, not exceeding 265 miles, in lieu of two subsidies granted by chapter 8 of 1900, for 35 and 20 miles, respectively, from Parry Sound towards James Bay.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on September 8, 1904, under authority of orders in council, dated December 24, 1903, and July 23, 1904.

A supplementary agreement was entered into with the company on March 27, 1906, under the retroactive Act, of 1904, chapter 33, and the order in council of February16, 1906, fixing the maximum and minimum amounts payable.

Work has been done under this contract, during the nine months between June 30, 1906, and March 31, 1907, to the extent of 79 per cent of the total estimated, and, under authority of an order in council dated December 22, 1906, payment has been made to the extent of $420,608, making the total payments up to March 31, 1907, $1,071,872.

JOGGINS RAILWAY COMPANY.

(Now Canada Coals and Railway Company.)

(See Annual Report for 1891-92.)

KETTLE RIVER VALLEY RAILWAY COMPANY.

(See No. 611.)

This company was incorporated by the Dominion Act of 1901, chap. 68, with powers for the construction of a line of railway from a point on the international boundary line at or near Cascade city, British Columbia, thence running in a westerly direction, following the course of the Kettle river, to a point on the said international boundary line at or near Carson city, with a branch from a point at or near Grand Forks to a point 50 miles up the north fork of the Kettle river, following the valley of the same river; also with a branch from a point at or near Grand Forks, via Greenwood, to a point on the international boundary line at or near Midway. In addition, the company was authorized to form connections at the boundary line, at the said point, with a proposed railway to Republic in the State of Washington, and generally with the railway system of the United States.

By the Act of 1904, chap. 89, additional lines of railway were authorized. (*a*) From a point 50 miles up the north fork of the Kettle river, thence via Fire Valley

to Vernon, thence westerly to a junction with the Nicola, Kamloops and Similkameen Coal and Railway Company at or near Quilchena. (*b*) From a point on the line so to be constructed at or near the junction of the east fork and west fork of the north fork of Kettle River to Franklin Camp, thence to Killarney by the most feasible route.

By the Dominion Subsidy Act, 3 Edw. VII. (1903), chap 57, section 2, item 67, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for a line of railway from Grand Forks to a point 50 miles up the north fork and west fork of the north fork of Kettle river, not exceeding 50 miles.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on July 28, 1905, under authority of an order in council of the same date.

No payments have been made up to March 31, 1907.

KINGSTON, NAPANEE AND WESTERN RAILWAY COMPANY.

(Amalgamated with Bay of Quinté Railway Company.)

(See Napanee, Tamworth and Quebec Railway.)

KINGSTON AND PEMBROKE RAILWAY COMPANY.

(See Annual Report for 1884-85.)

KLONDIKE MINES RAILWAY COMPANY.

(See No. 615.)

This company was incorporated by the Dominion Act of 1899, chap. 72, with powers for the construction of a line of railway from Klondike City along the Klondike river to Bonanza Creek, and thence along the Yukon river to Dawson City, together with power to construct certain branch lines. Other powers of a general commercial character were granted.

By the Subsidy Act of 1903, chap. 57, section 2, item 71, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on average cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a railway from Dawson to Stewart river, not exceeding 84 miles.

The company having applied for this subsidy, a contract was entered into with them for the work on February 1, 1905, under authority of orders in council of May 7 and December 24, 1904, and January 7, 1905.

The time for completion of this railway has been extended to August 1, 1907. During the nine months between June 30, 1906, and March 31, 1907, payments have been made to the extent of $96,000, the total paid up to the latter date.

KOOTENAY AND ARROWHEAD RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Report of 1905-06.)

KOOTENAY CENTRAL RAILWAY COMPANY.

(See No. 610.)

This company was incorporated by the Dominion Act of 1901, chap. 71, with powers for the construction of a line of railway. (*a*) From Fort Steele to Elko or some other convenient point on the Crow's Nest Railway between Elko and Wardner, thence on either the east or west side of the Wigwam river, or by the most convenient route, to the international boundary line. (*b*) From Fort Steele to Windermere, by either the east or west side of the Kootenay river, thence to the town of Golden on the main line of the Canadian Pacific Railway, and may build and operate such tramways in connection therewith, not exceeding in any one case ten miles in length, as are from time to time authorized by the Governor in Council. Other powers of a general commercial character were granted, including the acquisition and operation of smelters. By the Dominion Subsidy Act, 3 Edward VII. (1903), chap. 57, section 2, item 66, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a line of railway from Golden to the international boundary line, via Windermere and Fort Steele, and crossing the Crow's Nest Railway at or near Elko, not exceeding 186 miles.

The company having applied for this subsidy, a contract was entered into with them accordingly, on June 23, 1906, under authority of an order in council, dated May 14, 1906.

No payments have been made up to March 31, 1907.

LAKE ERIE AND DETROIT RIVER RAILWAY COMPANY.

Formerly 'the Lake Erie, Essex and Detroit Railway Company. Name changed by Dominion Act, 54-55, Vic., chap. 88 (1891).

(See Annual Report for 1901-02.)

L'ASSOMPTION RAILWAY COMPANY.

(See Annual Report of 1886-87.)

LEAMINGTON AND ST. CLAIR RAILWAY COMPANY.

(Amalgamated with Canada Southern Railway.)

(See Annual Report of 1888-89.)

LAKE TEMISCAMINGUE COLONIZATION RAILWAY COMPANY.

(Now part of Canadian Pacific Railway System.)

(See Annual Report 1896-97.)

LAURENTIAN RAILWAY COMPANY.

(See St. Lawrence, Lower Laurentian and Saguenay Railway Company.)

LINDSAY, BOBCAYGEON AND PONTYPOOL RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Report of 1904-05.)

LOTBINIÈRE AND MEGANTIC RAILWAY COMPANY.

(See Annual Report of 1896-7.)

MABOU AND GULF RAILWAY COMPANY, LIMITED.

(See No. 562.)

This company was incorporated by the Act of the province of Nova Scotia, 2 Edw. VII. (1902), chap. 134, with powers for the construction of a line of railway from the Mabou coal mines, in the county of Inverness, to a shipping point on Mabou Harbour, thence to connect with the Inverness and Richmond Railway, and also a branch connecting with the Intercolonial Railway at or near Orangedale; and a branch from a point on the Intercolonial Railway to a shipping pier on Caribou Cove or Inhabitants Bay. Other powers of a general commercial character were granted.

By the Dominion Railway Subsidy Act, 3 Edw. VII. (1903), chap. 57, section 2, item 18, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a line of railway from Mabou coal mines to a point at or near Glendyer, thence to Orangedale on the Intercolonial Railway, not exceeding 34 miles, a revote of the subsidy granted by chapter 4 of 1894, and in substitution of the 25 miles subsidized thereby from Orangedale to Broad Cove.

The company having applied for this subsidy, a contract was entered into with them, accordingly on July 5, 1905, under authority of an order in council, dated June 28, 1905.

No payments have been made to March 31, 1907.

MAGANETAWAN RIVER RAILWAY COMPANY.

(See Annual Report of 1905-06.)

MANITOULIN AND NORTH SHORE RAILWAY COMPANY.

(See Annual Report of 1905-06.)

MASSAWIPPI VALLEY RAILWAY COMPANY.

(See Annual Report for 1900-01.)

MIDDLETON AND VICTORIA BEACH RAILWAY COMPANY.

(See Nos. 503, 536 and 566.)

This company was incorporated by the statute of Nova Scotia, 60 Vic., chap. 82 (1897), as 'The Granville and Victoria Beach Railway and Development Company,' with powers to build a line of railway from some point on the Dominion Atlantic Railway at or near Bridgetown, through Granville, to some point at or near Victoria Beach on the Annapolis Basin, with approved branches, &c. This Act was revived by the Act of 1889, chap. 129. It was further revived by the Act of 1901, chap. 160, and extended for six years; the name being changed to the 'Middleton and Victoria Beach Company.'

By the Railway Subsidy Act of Canada, 63-64 Vic., chap. 8, item 28, the grant of a subsidy of $3,200 a mile, with a further subidy of 50 per cent on cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for 30 miles of a railway from Bridgetown to Victoria Beach, Nova Scotia.

The above company having applied, they were admitted to contract for the work on May 5, 1902, under authority of an order in council of April 1, the railway to be completed by December 1, 1903.

By the Subsidy Act of 1901, chap. 7, item 21, a similar subsidy was authorized to be granted for an extension from Bridgetown to Middleton, not exceeding 11 miles, and the company having applied for it, a contract was made with them, accordingly, on May 5, 1902 under authority of an Order in Council of April 1, the work to be completed by December 1, 1903.

By the Subsidy Act of 1903, chap. 57, item 2, a similar subsidy was authorized for 41 miles of railway from Victoria Beach to Middleton, in lieu of subsidies granted by chap. 8 of 1900, and chap. 7 of 1901.

Application having been made, the company was admitted to contract for this work on December 28, 1903, the time for completion being fixed as by August 1, 1905.

During the nine months between June 30, 1906, and March 31, 1907, payments have been made to the extent of $27,667.20, making the total payments up to March 31, 1907, $125,760.

MIDLAND RAILWAY COMPANY, LIMITED.

(Now part of Dominion Atlantic Railway System.)

(See Annual Report of 1903-04.)

During the nine months between June 30, 1906, and March 31, 1907, there was paid to the company, in addition to amounts previously paid, as recited in the departmental report of 1903-04, the sum of $4,967.70, which amount had been withheld pending consideration by the Auditor General, making the total payments up to March 31, 1907, $372,135.70.

MIDWAY AND VERNON RAILWAY COMPANY.

(See No. 613.)

This company was incorporated by the Act of the province of British Columbia, 1 Edward VII. (1901), chap. 81, with powers for the construction of a line of railway from a point at or near the town of Midway to a point at or near the mouth of Rock Creek; thence in a north-easterly direction to the west fork of Kettle river; thence following the west fork of said river, by the most convenient route via Okanagan Mission Valley, to Vernon.

By the Dominion Act of 1903, chap. 154, the railway works which the company by its said Act of incorporation has been empowered to undertake and operate, are declared to be for the general advantage of Canada.

By the Dominion Subsidy Act of 1903, chap. 57, section 2, item 69, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on the cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a line of railway from Midway to Vernon, not exceeding 150 miles.

The company having applied for this subsidy, a contract was entered into with them accordingly, on July 28, 1905, under authority of an order in council of the same date.

No payments have been made up to March 31, 1907.

MONTFORT COLONIZATION RAILWAY COMPANY.

(See Annual Report for 1900-01.)

MONTFORT AND GATINEAU COLONIZATION RAILWAY COMPANY.

(Now part of Great Northern Railway Company of Canada.)

(See Annual Report for 1902-03.)

MONTREAL AND CHAMPLAIN JUNCTION RAILWAY COMPANY.

(Now part of Grand Trunk Railway System.)

(See Annual Report for 1892-93.)

MONTREAL AND LAKE MASKINONGÉ RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Report for 1890-91.)

MONTREAL AND SOREL RAILWAY COMPANY.

(Purchased by Delaware and Hudson Railroad Company.)

(See Annual Report for 1892-93.)

MONTREAL AND WESTERN RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Report for 1893-94.)

MONTREAL AND OTTAWA RAILWAY COMPANY.

(Now part of Grand Trunk Railway System.)

(*Formerly the* VAUDREUIL AND PRESCOTT RAILWAY COMPANY. *Name changed by 53 Vic., chap. 58.)*

(See Annual Report for 1898-99.)

MONTREAL AND PROVINCE LINE RAILWAY COMPANY.

(Operated by Central Vermont Railway.)

(See Annual Report for 1901-02.)

NAKUSP AND SLOCAN RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Report for 1894-95.

NAPIERVILLE JUNCTION RAILWAY COMPANY.

(See No. 654.)

This company was incorporated by the Act of the province of Quebec, 51-52 Vic. (1888), chap. 99, with powers for the construction of a line of railway from some point in the parish of St. Remi to St. Cyprien, county of Napierville, traversing the counties of Napierville and Laprairie, with power to extend the said line through the county of St. John's. The Act of incorporation was subsequently amended by chap. 68 of the statutes of 1900 (Quebec), and chap. 73 of the statutes of 1904 (Quebec). By virtue of its Acts of incorporation and the amending Acts referred to, the company is vested with all the rights and privileges necessary for the construction and working of a railway from a point in the parish of St. Constant, county of Laprairie, to a point in the parish of St. Bernard de Lacolle, county of St. John's, or else to near Rouse's Point.

By the Railway Subsidy Act, 6 Ed. VII. (1906), chap. 43, item 16, the grant to this company of a subsidy of $3,200 a mile, with an addition of 50 per cent on average expenditure in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a railway from St. Constant in the county of Laprairie and Napierville, through St. Edouard, St. Cyprien and Lacolle to a point at or near the international boundary line on the Delaware and Hudson Railway (Grand Trunk) in lieu of the 19 and 12-mile subsidies granted by chap. 7 of 1899, section 2, item 10, and chap. 4 of 1894, respectively, not exceeding 28 miles.

The company was admitted to contract on October 10, 1906, under authority of an order in council, dated September 21, 1906, the time for completion being fixed as July 31, 1910.

No payments have been made up to March 31, 1907.

NAPANEE, TAMWORTH AND QUEBEC RAILWAY COMPANY.

(Name changed to the KINGSTON, NAPANEE AND WESTERN RAILWAY COMPANY *by the Act 53 Vic., chap. 62.)*

(See Annual Report for 1895-96.)

NEW BRUNSWICK AND PRINCE EDWARD ISLAND RAILWAY COMPANY.

(See Annual Report for 1888-89.)

NEW BRUNSWICK COAL AND RAILWAY COMPANY.

(See Annual Report of 1905-06.)

NICOLA, KAMLOOPS AND SIMALKAMEEN COAL AND RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.

(See No. 570)

This company was incorporated by the British Columbia Act of 1891, chap. 47, with powers to contruct a single or double track line of railway from the eastern extremity of Nicola lake; thence to the town of Princeton, and thence by way of Simalkameen river in a southerly direction to Osoyoos lake; also from the terminus at Nicola in a northerly direction to the town of Kamloops. Other powers of a general commercial character were granted.

By the Subsidy Act of 1903, chap. 57, section 2, item 26, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on average cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a railway from a point at or near Spence's Bridge on the Canadian Pacific Railway to Nicola lake, not exceeding 45 miles, being a revote of subsidies granted by chap. 5 of 1892, and chap. 4 of 1894.

The company having applied for this subsidy, a contract was entered into with them for this work on April 27, 1905, under authority of an order in Council of April 20, 1905.

The sum of $110,592 was paid during the fiscal year 1905-06, the total paid up to March 31, 1907.

NORTHERN AND PACIFIC JUNCTION RAILWAY COMPANY.

(Now part of Grand Trunk Railway System.)

(See Annual Report of 1890-91.)

NORTHERN AND WESTERN RAILWAY COMPANY.

(See Annual Report of 1889-90.)

(Also under the head 'Canada Eastern Railway' in Annual Report of 1894-95.)

NOVA SCOTIA CENTRAL RAILWAY COMPANY.

(See Annual Report for 1898-99.)

NOVA SCOTIA EASTERN RAILWAY COMPANY, LIMITED.

(See Nos. 516, 519, 563, 607.)

This company was incorporated by the Act 1, Edward VII. (1901), chap. 130 (Nova Scotia), with powers to construct a line of railway from a point on the Intercolonial Railway at or near New Glasgow, in the county of Pictou, and passing through the counties of Pictou and Guysborough, to the deep waters of Country Harbour, in the county of Guysborough, and from the Cross Roads, Country Harbour, in the said county of Guysborough, to a point at or near the town of Guysborough, and thence to a point on the Strait of Canso, in the said county of Guysborough, and such other lines as may become feeders for the main trunk line above described.

By the Subsidy Act of 1901, 1 Edward, VII., chap. 7, item 1, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on average expenditure in excess of 15,000 a mile, the whole subsidy not to exceed $6,400 a mile, was authorized for a line of railway from a point on the Intercolonial Railway, at or near New Glasgow to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysborough, in lieu of the subsidies granted by 1897, chap. 4, and 1899, chap. 7, section 2, item 34, not exceeding 80 miles.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on February 19, 1903.

By the Subsidy Act of 1903, chap. 57, items 19 and 63, the grant of subsidies was authorized, on terms similar to the above, for lines of railway from New Glasgow to Cross Roads, Country Harbour, via Guysborough, to the Straits of Canso, with a branch from Cross Roads down the Country Harbour river to navigable waters, 116 miles; and from Dartmouth through the Musquodoboit valley to a point at or near Melrose, to connect there with the railway mentioned in item 19.

The company having applied, were admitted to contract under both subsidies, the two agreements being dated April 19, 1904; the railways to be completed by December 31, 1906.

No payments have been made up to March 31, 1907.

NOVA SCOTIA SOUTHERN RAILWAY COMPANY.

(See Annual Report for 1902-03.)

ONTARIO AND PACIFIC RAILWAY COMPANY.

(Name changed to OTTAWA AND NEW YORK RAILWAY COMPANY *by 60-61 Vic., chap 57, 1897.)*

(See Annual Report for 1901-02.)

ONTARIO AND QUEBEC RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See West Ontario Pacific Railway Company, and Annual Report for 1891-92.)

ONTARIO, BELMONT AND NORTHERN RAILWAY COMPANY.

(Operated by Central Ontario Railway Company.)

(See Annual Report for 1896-97.)

ONTARIO AND RAINY RIVER RAILWAY COMPANY.

(Amalgamated with and under the name of the CANADIAN NORTHERN RAILWAY COMPANY *under the Act 62-63 Vic., chap. 80.)*

(See Ontario and Rainy River Railway Company in Annual Report for 1902-03, and under Canadian Northern Railway Company in present report.)

ORFORD MOUNTAIN RAILWAY COMPANY.

(See Annual Reports for 1893-94 and 1894-95.)

(See No. 594.)

The history of this railway was given in the annual report for 1894-95, with a statement of the subsidies paid for the then completed line of railway.

By the Subsidy Act of 1903, chap. 57, section 2, item 50, the grant of a subsidy of $3,200 a mile, with a further subsidy of 50 per cent on average cost in excess of $15,000 a mile, not exceeding in all $6,400 a mile, was authorized for a line of railway from a point on its main line between Lawrenceville and Eastman to Lake Bonella, 5 miles; from Kingsbury to Windsor Mills, 10 miles; and from Eastman to the town line between the township of Bolton and the township of Potton, 12 miles—not exceeding in the whole 27 miles.

The company having applied for these subsidies, contracts were entered into with them, accordingly, on March 9, and June 12 and 23, 1905, for the construction of the sections above named, under the authority of orders in council, dated March 25, 1905, for the two first named sections of 5 and 10 miles, and on February 10, 1905, for the last named section.

During the fiscal year 1905-06, payments have been made to the extent of $45,-764.50, making the total paid to March 31, 1907, including previous, subsidies $168,814.50.

OTTAWA AND NEW YORK RAILWAY COMPANY.

(Purchased by New York Central Railroad Company.)

(See Ontario and Pacific Railway Company.)

OTTAWA, ARNPRIOR AND PARRY SOUND RAILWAY COMPANY.

(Now the CANADA ATLANTIC RAILWAY COMPANY. *by amalgamation, under the Act 62-63 Vic., chap. 81, 1899.)*

(See Annual Report for 1898-99.)

OTTAWA AND GATINEAU VALLEY RAILWAY COMPANY.

(Name changed to the OTTAWA AND GATINEAU RAILWAY COMPANY, *by the Act 57-58 Vic., chap. 87, which consolidated and amended Acts relating to the company.)*

(Name further changed to the OTTAWA NORTHERN AND WESTERN RAILWAY COMPANY, *by the Act 1 Edw. VII., chap. 80, 1901.)*

(See Annual Report for 1903-04.)

OTTAWA NORTHERN AND WESTERN RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Ottawa and Gatineau Valley Railway Company and Pontiac Pacific Junction Railway Company.)

OSHAWA RAILWAY AND NAVIGATION COMPANY.

(Name changed to the OSHAWA RAILWAY COMPANY, *by 54-55 Vic., chap. 91.)*

(See Annual Report for 1895-96.)

PARRY SOUND COLONIZATION RAILWAY COMPANY.

(Now part of Grand Trunk Railway System.)

(See Annual Report for 1895-96.)

QU'APPELLE, LONG LAKE AND SASKATCHEWAN RAILWAY COMPANY.

(See Annual Report for 1890.)

QUEBEC BRIDGE COMPANY.

(Now the QUEBEC BRIDGE AND RAILWAY COMPANY,—*name changed by the Act 3, Ed. VII., chap. 177, 1903.)*

(See No. 467 and Acts, chaps. 54 and 177 of 1903, and 35 of 1907.)

This company was incorporated by the Dominion Act, 50-51 Vic., chap. 98 (1887), with powers to construct a railway bridge over the River St. Lawrence near Quebec, and to arrange the same for the use of foot passengers and vehicles, and to construct

and operate lines of railway to connect with existing or future lines of railway on each side of the river.

By the Act 60-61 Vic., chap. 69 (1897), the powers of the company were revived, and the time for construction was extended to June 29, 1902.

By the Act 63-64 Vic., chap. 115 (1900), the time for completion was extended to June 14, 1905, and the company were further empowered to arrange for the placing of electric wires on the bridge and connecting railways, and for the passage of electric street railway or tram cars.

By the Railway Subsidy Act, 62-63 Vic., chap. 7 (1899), the grant of a subsidy to this company of $1,000,000 was authorized for a railway bridge over the River St. Lawrence at Chaudière basin, and by the Act of 1900, chap. 8, clause 10, it was made applicable, one-third to the substructure and approaches, and two-thirds to the superstructure.

On November 12, 1900, the company were admitted to contract for this subsidy work.

The site and plans of the bridge were approved by the Railway Committee of the Privy Council, and by an order in council, dated May 16, 1898.

The structure is to be a cantilever bridge, composed of two approach spans of 220 feet each, two anchor spans of 500 feet each, and a centre span of 1,800 feet from centre to centre of the piers. The under side of the bridge will give a height of 150 feet above high water. When completed, it will comprise a double track railroad, two lines for electric tramways, and two ordinary roads for vehicles and foot passengers.

Subsidy payments to the extent of $374,353.33 were made up to June 30, 1903.

By the Dominion Special Act, 3 E l. VII., chap. 177, assented to on July 10, 1903, the name of the above company was changed to 'The Quebec Bridge and Railway Company,' with powers to construct lines of railway from the northern terminus of the company's bridge to the city of Quebec, also from the southern terminus of the said bridge to a point at or near the intersection of the Grand Trunk Railway with the Intercolonial Railway at Chaudière Curve, or to some point on those lines near named section to connect with the line of the Canadian Pacific Railway. Other powers of a general commercial character were granted. The powers of the company for the construction of all its authorized works was extended to July 10, 1910.

Negotiations were had having in view entry into agreement for the guarantee by the government of the bonds of the company, and for conveying to the government, at its option, the bridge, railways and property of the company.

Under the authority of an order in council, dated October 19, 1903, and under the same date, the company entered into an agreement with the government, accordingly, subject to ratification by Parliament; and by Public Act of the same year, 1903, chap. 54, such agreement, annexed as a schedule to the Act, was so ratified and confirmed, subject to the provision that the consent of parliament shall be given before the government exercise the right of taking over the company's property. It was

further provided that the Governor in Council should have the right to appoint three directors of the company.

By this agreement the company released the government from any claim for the unpaid balance of the subsidy of $1,000,000 granted to them, and the government agreed to guarantee the principal and interest of the company's bonds to the extent of $6,678,200, such bonds to be payable in 50 years from the date thereof, bearing interest at 3 per cent per annum, payable half-yearly, and to be a first charge, secured by a mortgage, upon all the company's franchises, tolls, and property of whatsoever kind, the mortgage to secure such securities to be made to a trustee or trustees approved by the Governor in Council and to be subject to like approval, the government to have the right to take possession of the undertaking and property at any time on one month's notice, paying the shareholders the amount of their stock at par value, not exceeding $265,585.70, with simple interest at 5 per cent, and an addition of 10 per cent on the par value of fully paid up shares, and assuming the approved obligations of the company for construction, operation and maintenance, according to the terms of the aforesaid bonds and the mortgage securing the same. The date for the completion of the work was fixed as December 1, 1903.

In pursuance of this authority there was executed, on February 1, 1904, between the Quebec Bridge and Railway Company, the Royal Trust Company (Montreal), and His Majesty, a mortgage trust deed, conveying to the said trust company as trustees all the property and franchises of the bridge company and providing for the issue of bonds to the extent of $6,678,200.

In pursuance of the requirements of the said agreement, the plans, profiles and specifications of the company's proposed railway works have been approved, as follows:—

By an order in council of January 27, 1904, for the line from the northern terminus of the bridge to Champlain market, in the city of Quebec, 6·44 miles, and by an order in council of February 2, 1904, from the south terminus of the bridge to a point of junction with the Intercolonial Railway, 12,600 feet.

Under the terms of the company's aforesaid agreement in respect of the bond guarantee ,the amount of the issue of bonds is to be fixed by the Chief Engineer's certificate as to the value of the work done and materials delivered, from time to time, on the company's works.

Further agreements have been entered into, dated February 9 and March 3, 1906, in respect of advances from the Bank of Montreal.

Under certificates isued from time to time, payments have been made to the extent of $5,016,453.66, covering work done and materials delivered. This represents the position up to March 31, 1907, the close of the new fiscal year.

QUEBEC CENTRAL RAILWAY COMPANY.

(See No. 651.)

The history of this railway was given in the annual report of 1895-96, with a statement of the subsidies paid for the then completed lines of railway.

By the Railway Subsidy Act, 6 Ed. VII. (1906), chap. 43, item 13, the grant of a subsidy of $3,200 a mile, with an additin of 50 per cent on average cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for an extension of the company's line of railway from St. Francis to St. George, not exceeding 9 miles; and for a line of railway from Scott Junction to the Quebec bridge, not exceeding 23 miles; in lieu of the subsidy granted by chap. 57 of 1903, section 2, item 46.

The company having applied for the subsidy granted for the line from St. Francis to St. George, 9 miles, a contract was entered into with them, accordingly, on January 28, 1907, under the authority of an order in council dated October 12, 1906, the road to be completed by October 1, 1907.

No payments have been made up to March 31, 1907.

QUEBEC AND LAKE ST JOHN RAILWAY COMPANY.

(See Annual Report of 1895-96.)

(See No. 601.)

The history of this railway was given in the annual report for 1895-96, with a statement of the subsidies paid for the then completed lines of railway.

By the Railway Subsidy Act, 3 Edw. VII. (1903), chap 57, section 2, item 57, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on average cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a line or railway from La Tuque on the St. Maurice river to a point on the Lake St. John Railway near the River Jeannotte, not exceeding 35 miles.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on October 12, 1904, under authority of an order in council dated May 5, 1904.

During the nine months between June 30, 1906, and March 31, 1907, payments have been made under the above contract to the extent of $64,512, making the total up to March 31, 1907, $150,528.

By the Railway Subsidy Act of 1906, chap. 43, item 29, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on average cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a line of railway from Roberval to the government wharf at Lake St. John, in lieu of the subsidy granted by chap. 57 of 1903, not exceeding one mile.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on November 24, 1906, under authority of an order in council, dated October 17, 1906.

This extension of the railway is completed, and during the nine months between June 30, 1906, and March 31, 1907, the subsidy, $3,200, has been paid.

It may be observed that the company had previously been subsidized, under various Acts, for a line of railway from Quebec to Lake St. John, 186 miles, includ-

ing a bridge across the St. Charles river, and also for the Chicoutimi branch, 72 miles, the aggregate payments for these works amounting to the sum of $1,006,743.50.

QUEBEC, MONTMORENCY AND CHARLEVOIX RAILWAY COMPANY.

(Now the Quebec Railway, Light and Power Company.)

(See Annual Report of 1894-95.)

QUEBEC AND NEW BRUNSWICK RAILWAY COMPANY.

(See Annual Report of 1905-06.)

RED DEER VALLEY AND COAL COMPANY.

(See Annual Report for 1902-03.)

RESTIGOUCHE AND WESTERN RAILWAY COMPANY.

(Now International Railway Company of New Brunswick, which see.)

(See Annual Report of 1905-06.)

SCHOMBERG AND AURORA RAILWAY COMPANY.

(See Annual Report of 1903-04.)

SHUSWAP AND OKANAGAN RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Report of 1894-95.)

SOUTH NORFOLK RAILWAY COMPANY.

(Operated by Grand Trunk Railway Company.)

(See Annual Report of 1888-89.)

SOUTH SHORE RAILWAY COMPANY (of New Brunswick).

(See Annual Report of 1896-97.)

SOUTH SHORE RAILWAY COMPANY, QUEBEC.

(See Annual Report of 1904-05.)

ST. CATHARINES AND NIAGARA CENTRAL RAILWAY COMPANY.

(Now Niagara, St. Catharines and Toronto Railway Company, electric.)

(See Annual Report of 1895-96.)

ST. CLAIR FRONTIER TUNNEL COMPANY.

(See Annual Report, 1890-1, and 1891-2.)

ST. GABRIEL DE BRANDON AND STE. EMELIE DE L'ENERGIE RAILWAY COMPANY.

(See Annual Report for 1902-03.)

ST. JOHN VALLEY AND RIVIÈRE DU LOUP RAILWAY COMPANY.

(See Annual Report for 1893-94.)

ST. STEPHEN AND MILLTOWN RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Reports for 1895-96 and 1900-01.)

STEWIACKE VALLEY AND LANSDOWNE RAILWAY COMPANY.

(Now part of the Dominion Atlantic Railway System.)

(See Annual Report 1895-96.)

ST. LAWRENCE AND ADIRONDACK RAILWAY COMPANY.

(Operated by New York Central Railroad.)

(See Annual Reports for 1893-94 and 1900-01.)

ST. LAWRENCE, LOWER LAURENTIAN AND SAGUENAY RAILWAY COMPANY.

(Name changed to LAURENTIAN RAILWAY COMPANY, *by Provincial Act 51-52 Vic., ch. 108.)*

(See Annual Report for 1891-92.)

ST. LOUIS AND RICHIBUCTO RAILWAY COMPANY.

(See Annual Report for 1884-85.)

ST. MARY'S RIVER RAILWAY COMPANY.

(See Annual Report of 1905-06.)

TÉMISCOUATA RAILWAY COMPANY—RIVIÈRE DU LOUP TO EDMUNDSTON.

(See Annual Report for 1892-93.)

THOUSAND ISLANDS RAILWAY COMPANY.

(See Annual Reports for 1895-96 and 1901-02.)

TILSONBURG, LAKE ERIE AND PACIFIC RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Report of 1904-05.)

TOBIQUE VALLEY RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Report for 1893-94.)

TORONTO, GREY AND BRUCE RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Annual Report for 1887-88.)

TRANS-CANADA RAILWAY COMPANY.

(See Annual Report of 1905-06.)

UNITED COUNTIES RAILWAY COMPANY.

(Now part of Delaware and Hudson Railroad System.)

(See Annual Report for 1900-01.)

VAUDREUIL AND PRESCOTT RAILWAY COMPANY.

(Leased to Canadian Pacific Railway Company.)

(See Montreal and Ottawa Railway Company.)

WATERLOO JUNCTION RAILWAY COMPANY.

(Operated by Grand Trunk Railway.)

(See Annual Report for 1891-92.)

WESTERN COUNTIES RAILWAY COMPANY.

(Name changed to THE YARMOUTH AND ANNAPOLIS RAILWAY COMPANY, *by 56 Vic., ch. 63.)*

(Name further changed to THE DOMINION ATLANTIC RAILWAY COMPANY, *by 57-58 Vic., chap. 69.)*

(See Annual Report for 1894-95.)

WEST ONTARIO PACIFIC RAILWAY COMPANY.

(Leased to Ontario and Quebec Railway Company—C.P.R.)

(See Annual Report of 1890-91.)

WOODSTOCK AND CENTREVILLE RAILWAY COMPANY.

(See Annual Report for 1895-96.)

YARMOUTH AND ANNAPOLIS RAILWAY COMPANY.

(See *Western Counties Railway Company.*)

YORK AND CARLETON RAILWAY COMPANY.

(See No. 605.)

The history of this railway was given in the annual report of 1901-02, with a statement of the subsidies paid up to the close of that year.

By the Railway Subsidy Act, 3 Ed. VII. (1903), chap. 57, item 61, the grant of a subsidy of $3,200 a mile, with an addition of 50 per cent on average cost in excess of $15,000 a mile, limited in all to $6,400 a mile, was authorized for a line of railway from the present terminus of this company's railway westerly, 5 miles.

The company having applied for this subsidy, a contract was entered into with them, accordingly, on August 20, 1906, under authority of an order in council, dated November 3, 1905, the road to be completed by November 1, 1906.

No payments have been made up to March 31, 1907.

LAND SUBSIDIES.

A number of companies have been aided by subsidies in land, duly authorized by parliament and granted by the Department of the Interior, to whose report reference must be made for information as to their position.

In the annual report of this department for 1895-96 information was given as to a number of these land subsidized companies.

CANALS.

The total expenditure charged to capital account on the original construction and subsequent enlargement of the several canals of the Dominion up to March 31, 1907, amounts to $91,734,718.21. In addition, an aggregate of $24,495,624.73 has been expended from the consolidated fund, covering repairs, renewals, maintenance and operation of these works, making a total of $116,230,342.94. The total revenue derived therefrom, including rental of lands and water powers, amounts to $13,618,586.47.

The canal expenditure for the period of nine months ended on March 31, 1907, was as follows :—

On construction and enlargement a total of $887,838.61, charged to capital, and further amounts aggregating $933,645.29, charged to the consolidated fund, namely, $264,110.73, for maintenance, charged to income; also $383,845.74, for staff, and $299,266.19, for repairs, the last two classes of expenditure being charged to revenue, making the total canal expenditure for the nine months $1,835,061.27.

The total net amount collected amounted to $105,003.15, of which $92,310.51 was for hydraulic rents, the balance being from wharfage dues, fines, &c. No tolls are charged on any of the Dominion canals.

On July 1, 1906, the balance of rents unpaid was $149,400.67, and the rents accrued during the subsequent nine months, amounted to $97,113.16, making a total of

$246,513.83. The rents received amounted, as above, to $92,310.51, leaving a balance of rents uncollected on March 31, 1907, amounting to $154,203.32.

Summaries of these expenditures and receipts will be found in the statements furnished by the accountant of the department, printed in the appendices, Part I., of the present report.

The above figures relate to the fiscal year 1906-07, but very voluminous statistics relating to the canal traffic, and various commercial statistics for the season of navigation of the year 1906 will be found in the 'Canal Statistics,' which are issued as a separate report.

The principal facts of these statistics are summarized as follows:—

The total traffic through the several canals of the Dominion for the season of 1906 amounted to 10,523,185 tons, an increase of 1,151,441 tons compared with the previous year. This includes 6,574,039 tons passing through the Sault Ste. Marie Canal, against 5,473,406 tons in 1905. The amount of tolls that would have accrued had they been in force is $360,673.05.

The following features of the principal canal traffic during the season of 1906 will be of interest:—

On the Welland Canal 1,201,967 tons of freight were moved, an increase of 109,917 tons, of which 740,488 tons were agricultural products, an increase of 143,183 tons, and 147,468 tons produce of the forest; of coal 147,587 tons were carried; 979,099 passed eastward, and 222,868 tons westward. 1,190,780 tons were through freight, of which 968,790 tons passed eastward.

Of the through freight, Canadian vessels carried 607,778 tons, an increase of 152,661 tons, and United States vessels 583,002 tons, a decrease of 37,849 tons.

The total through freight passed eastward and westward through this canal to United States ports was 321,431 tons; an increase of 18,335 tons compared with the year 1905.

The quantity of grain passed down the Welland and St. Lawrence Canals to Montreal was 404,935 tons, an increase of 63,504 tons compared with the previous year; of this none was transhipped at Ogdensburg, as against 40,641 tons transhipped in 1903. The further quantity of 34,199 tons of grain passed down the St. Lawrence canals, only, to Montreal, making the total 449,673 tons.

On the St. Lawrence canals 1,637,017 tons of freight were moved, a decrease of 115,838, of which 911,231 were eastbound through freight, and 289,761 tons westbound through freight; 624,706 were agricultural products; 595,566 tons merchandise; 451,414 tons coal, and 271,324 tons forest products.

In 1906 84 cargoes of corn and wheat, aggregating 108,734 tons, were taken down direct to Montreal through the Welland and St. Lawrence canals, as against 115 cargoes, aggregating 180,206 tons in 1905; 75 cargoes, aggregating 116,098 tons in 1904, and 74 cargoes, aggregating 99,582 tons, in 1903. In 1900 there were only 15 cargoes, aggregating 7,924 tons.

On the Ottawa River canals the total quantity of freight moved was 397,415 tons, an increase of 26,074, of which 346,265 tons were produce of the forest.

On the Chambly Canal 498,939 tons were moved, an increase of 51,870, of which 368,474 tons were produce of the forest and 62,954 tons of coal.

On the Rideau Canal 82,159 tons were carried, an increase of 22,295 ,31,430 tons being the product of the forest and 9,990 tons of coal.

On the St. Peter's Canal 76,327 tons were carried, a decrease of 4,750, of which 50,561 tons were merchandise; 39,914 tons of coal.

On the Murray Canal 27,727 tons passed, a decrease of 1,694, and 3,274 tons of this were the product of the forest .

On the Trent Valley Canal 28,495 tons were moved, of which 26,645 tons were the product of the forest.

On the Sault Ste. Marie Canal the total movement of freight was 6,574,039 tons, being an increase of 1,100,633 tons carried in 5,680 vessels, the number of lockages being 4,152. Of wheat, 34,388,478 bushels, and of other grain 16,702,861 bushels were carried; 2,439,513 barrels of flour, 2,947,616 tons of iron ore, 1,238,011 tons of coal, and 33,352,198 feet, board measure, of lumber; all of these items show an increase. The total traffic at this point, accommodated by the canals, the American and Canadian, amounted to 51,754,331 tons, an increase of 7,478,735 tons, carried in 22,155 vessels, an increase of 474. The total quantity of wheat carried was 84,366,309 bushels, an increase of 15,808,309, and of other grain 54,364,759 bushels, an increase of 15,079,652. Of lumber the total was 887,519,198 feet, board measure, a decrease of 67,249,602.*

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* Following the course adopted for some years past, the following facts relating to the traffic passing through both the United States and the Canadian canals at Sault Ste. Marie during the season of 1906 have been compiled from the 'Statistical Report of Lake Commerce,' prepared under the direction of Colonel Charles E. L. B. Davis, of the Corps of Engineers, U. S. Army, a report of the highest value and interest as indicating the wonderful growth of the northwestern section of this continent during the past fifty-two years since the date, 1855, of the opening of the canal, built at a cost of $1,000,000 by the State of Michigan. This was the first ship canal, but a small canal with a lock 38 feet long, and 8 feet 9 inches wide, and with a lift of 9 feet, had been built in 1797-98, by the Northwest Fur Company on the Canadian side of the river, for the accommodation of bateaux. It, however, was destroyed in 1814 by the American troops.

In 1855 there were 193 passages of vessels, carrying 14,503 tons of freight. Neither wheat nor other grain formed part of this freight.

The following are the principal features of the operations of the season of 1906 for both the American and Canadian canals :—

All tonnage is net tons of 2,000 lbs. No tolls are charged.

The season of navigation from April 13 to December 22 1906, lasted for 253 days, the American canals being opened for 249 days, and the Canadian 253.

The depth of water permitted a safe draft of 19½ feet.

The total freight passed through these canals during the season aggregated 51,751,080 net tons, an increase, compared with the previous year of 7,480,400 tons, or 17 per cent ; 63,033 passengers were carried, an increase of 8,829, or 16 per cent, the freight traffic was largely in excess of that in any previous year, the greatest previous traffic having been 44,270,680 tons in 1905.

The American canals carried 87 per cent of the total freight, or 45,180,292 tons, an increase of 6,378,102 tons or 16 per cent, and 49 per cent of the total passengers, or 30,925, an increase of 2,524, or 9 per cent.

On the Canadian canal 6,570,788 tons of freight were carried, or 13 per cent of the total, an increase of 1,102,298 tons, or 20 per cent. The number of passengers was 32,108, an increase of 6,305, or 24 per cent.

The total value of the freight carried was $537,463,454, an average value per ton of $10.39. The amount paid for freight transport was $36,666,889. The average distance freight was carried was 842·4 miles, the total of mile tons being 43,596,953,680.

In connection with the question canal versus railway transport of grain from the west, it may be noted that whereas grain and peas passed down to Montreal through the Welland and St. Lawrence canals to the extent of 404,935 tons, an increase of 63,504 tons, compared with the previous year, the quantity carried to Montreal via the Canadian Pacific and Grand Trunk Railways amounted to 386,963 tons, a decrease of 238,586 tons. Over the route from Depot Harbour on Georgian Bay, Lake Huron, via the Canada Atlantic Railway to Coteau Landing, at the head of the Soulanges Canal, thence by barge to Montreal, in the season of 1903 the total freight carried was 315,779 tons; 109,937 tons were corn and 175,954 wheat; in 1904 the total freight carried was 209,260 tons; 61,675 tons were corn and 137,338 tons were wheat. In 1905 the total freight was 254,378 tons; 54,272 tons were corn and 168,966 tons were wheat. In 1906 no business was done.

The quantity of grain carried to tidewater on the New York State canals was 294,467 tons, an increase of 78,230 tons, while the quantity carried by the railways of the state to tidewater amounted to 3,942,771 tons, an increase of 778,231.

The total number of registered vessels using the canals was 879 and there were in addition 810 passages by unregistered craft. The total value of registered vessels was $94,532,500. American vessels carried 95 per cent and Canadian vessels 5 per cent of the total freight : these proportions being the same as in the previous year.

Of the 879 vessels in commission, 767 were American, valued at $88,392,000, and aggregating 1,425,837 registered tons capacity, and 112 Canadian, valued at $6,140,500 and aggregating 76,920 registered tons capacity. The Canadian, compared with the previous year, showed an increase of 15 in number, $711,500 in value, and 8,564 in tonnage.

597 were American steamers, valued at $82,465,000, aggregating 1,219,838 registered tons, and 101 were Canadian steamers, valued at $5,780,000, aggregating 66,414 tons.

There were 170 registered American sailing vessels, valued at $5,927,000, totalling 205,999 registered tons, and 11 Canadian, valued at $360,500, with an aggregate register tonnage of 74,449 tons.

Unregistered American vessels carried 13,115 tons of freight, and unregistered Canadian 85,703 tons.

Out of the 22,155 passages of the season, 3,537 were by 90 vessels under 100 tons register, carrying 408 tons.

44 new vessels were put in commission in 1906, all being freight steamers ; 32 of these are 500 feet and over in length, carrying from 9,000 to 14,000 tons in a single cargo.

The tendency to increase in size of vessels continues. In 1884 there were no boats carrying more than 4,000 tons, and of these only 18 carried more than 3,000 tons. In 1906, there were 134 carrying from 3,000 to 4,000 tons, 37 from 4,000 to 5,000 tons, 24 from 5,000 to 6,000 tons, 52 from 6,000 to 7,000 tons, 82, from 7,000 to 8,000 tons, 48 from 8,000 to 10,000 tons, 36 from 10,000 to 12,000 tons, and 12 from 12,000 to 14,000 tons. In the previous year, 1904, there was only 1 vessel carrying over 10,000 tons.

As to the dimensions of vessels in 1906, there were 171 vessels from 300 to 400 feet in length, and of from 38 to 50 feet beam, 128 from 400 to 500 feet in length, and of from 45 to 53 feet beam, and 57 of 500 to 600 feet in length with 52 to 60 feet beam.

The largest single cargo carried by steamer was 13,272 tons and by sailing vessel 8,960 tons. The greatest amount of freight carried during the season was by steamer 313,434 tons, and by sailing vessel 141,770 tons. The greatest number of miles run was, by steamer, 42,986 miles and by sailing vessel 31,575 miles.

There were 22,155 passages through the canals of which 16,475 were through the American canals and 5,680 through the Canadian canal. These were effected in 14,523 lockages, namely, 10,367 on the American canals, and 4,156 on the Canadian.

The principal items of freight compared with the previous year were as follows :—

Hard (anthracite) coal 1,011,375 tons, an increase of 26,674 tons ; soft (bituminous) coal 7,728,255 tons, an increase of 2,203,900 tons ; flour 6,495,350 barrels, an increase of 722,631 barrels ; wheat 84,271,358 bushels, an increase of 15,950,070 bushels ; grain other than wheat 54,343,155 bushels, an increase of 15,113,602 bushels (this comprised 587,650 bushels of rye, 20,463,374 bushels of oats, 775,206 bushels of corn, 10,976,929 bushels of barley, and 21,539,996 bushels of flax); manufactured and pig iron 391,105 tons, an increase of 153,409 tons ; salt 468,162 barrels, an increase of 45,040 barrels ; copper 107,633 tons, an increase of 1,113 tons ; iron ore 35,357,042 tons, an increase of 4,024,405 tons ; lumber 900,631 M feet B. M., a decrease of 66,175 ; no silver ore was carried as against 41 tons the previous year ; building stone 6,222 tons, a decrease of 43 tons ; general merchandise 1,134,851 tons, an increase of 298,268.

Of the total eastbound and westbound freight carried by the state of New York canals (the Erie, the Champlain, the Black River, the Cayuga and Seneca and the Oswego), and the competing railways (the New York Central and the Erie Railway) respectively (amounting in 1906 to 82,244 222 tons more by 8,491,081 tons than in 1905, the proportion carried by the canals has fallen steadily from 68·9 per cent in 1859 and 47:0 per cent in 1869. to 6:8 per cent in 1898, 7:2 in 1899, 5:2 in 1900, 5:1 in 1901, 5·5 in 1902, 5·6 in 1903, 4·6 in 1904, 4·5 in 1905, and 4·5 in 1906. These canals carried, in 1905, 3,540,907 tons, an increase of 314,011 tons.

The enlarged Erie Canal, between Buffalo and Albany, is 350½ miles long; comprises 72 locks, 110 x 18 feet, with a depth of 7 feet of water, accommodating, as a maximum, vessels of 240 tons burden. The original canal was completed in 1836, and the enlargement in 1862. The total cost of construction was $51,609,200.

By means of the enlarged Canadian canal system and the intermediate waterways a minimum depth of fourteen feet of water from Lake Superior to the head of the ocean navigation at Montreal is afforded; the smallest locks being 270 feet in length

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The values of these several items of freight and the proportion of each to the whole were as follows :—Coal $25,136,044, or 4·68 per cent ; flour, wheat and other grain $124,281,196, or 24·80 per cent ; iron ore $121,881,795, or 22·69 per cent ; manufactured and pig iron $30,001,882, or 5·58 per cent ; copper $36,595,220, or 6·81 per cent ; lumber $19,813,882, or 3·69 per cent ; salt $351,121 ; building stone $74,664, and general merchandise $170,227,650, the last three items aggregating 31·75 per cent of the total value.

The eastbound traffic from Lake Superior aggregated 41,584,905 tons, the bulk being iron and copper ore, cereals, flour and lumber. Of this quantity 4,313,078 tons went to Lake Michigan ports, 4,293,708 tons in American vessels from American to American ports, and 19,370 tons in American vessels from Canadian to American ports ; no freight was carried to Lake Michigan ports in Canadian vessels. To Lake Huron 1,231,936 tons were carried, 129,120 tons in American vessels from American to American ports, 39,289 tons in American vessels from American to Canadian ports, 35,430 tons in American vessels from Canadian to American ports, 840,659 tons in Canadian vessels from Canadian to Canadian ports, none in Canadian vessels from Canadian to American ports and 187,438 tons in Canadian vessels from American to Canadian ports. To Lake Erie, 35,503,324 tons were carried, of which American vessels took from American to American ports 34,965,011 tons, from American to Canadian ports 11,550 tons, and from Canadian to American ports 404,696 tons. Canadian vessels carried from Canadian to Canadian ports 360 tons, from Canadian to American ports 121,707 tons, and none from American to Canadian ports. To Lake Ontario 536,567 tons, of which American vessels carried from American to American ports 22,353 tons, from American to Canadian ports 103,762 tons, and from Canadian to American none. Canadian vessels carried from Canadian to Canadian ports 404,285 tons, from Canadian to American ports none, and from American to Canadian ports 6,167 tons.

The westbound traffic to Lake Superior aggregated 10,166,175 tons. From Lake Michigan, American vessels carried from American to American ports 65,455 tons, from American to Canadian 3,877 tons, and Canadian vessels carried 42,226 tons from American to Canadian ports. There was no further traffic. From Lake Huron, American vessels carried 72,812 tons from American to American ports, and 8,206 tons from American to Canadian. Canadian vessels carried 349,066 tons from Canadian to Canadian ports, 20,162 tons from Canadian to American, and 1,870 tons from American to Canadian ports. There was no other traffic. From Lake Erie, American vessels carried 8,291,955 tons from American to American ports, and 766,552 tons from American to Canadian ports. Canadian vessels carried 2,677 tons from Canadian to Canadian ports, and 436,109 tons from American to Canadian ports. There was no other traffic. From Lake Ontario, American vessels carried 5,268 tons from American to American ports, 2,625 tons from American to Canadian and 2,188 tons from Canadian to American ports. Canadian vessels carried 85,743 tons from Canadian to Canadian ports, 2,390 tons from Canadian to American and 4,994 tons from American to Canadian ports.

The transportation charges per unit, including loading and unloading, on the principal items were as follows :—Coal, $0.35 per ton ; flour, $0.18 per barrel ; wheat and other grain, $0·022 per bushel ; manufactured iron, $2 per ton ; pig iron, $1.50 per ton ; salt, $0.12 per barrel ; copper, $1.50 per ton ; iron ore, $0.67 per ton ; lumber, $2.70 per M. ft. B.M.; building stone, $1.50 per ton; and general merchandise, $2 per ton. The total freight charges amounted to $36,666,889.06, of which those on coal amounted to $3,058,870.50 ; on wheat and other grain, $3,049,519.28 ; on iron ore, $23,689,218.14, and on lumber, $2,431,703.70.

The transportation charges averaged 0·084 of a cent per ton per mile, the average cost per ton being 71 cents.

and 45 feet in width, intended, for the purpose of ordinary traffic, to accommodate vessels, 255 feet long and 44 feet beam.*

The through route between Montreal and Port Arthur, on the west shore of Lake Superior, open as a 14-foot navigation, comprises 73 miles of canal, with 48 locks, and 1,150 miles of river and lake waters, or a total of 1,223 miles. From Montreal to Duluth, at the southwest of Lake Superior, the total distance is 1,357 miles, and to Chicago, 1,286 miles. A summary of this route will be found in the Chief Engineer's Report, Part II., and further details of the several works in the pages immediately following. At Port Arthur and at Fort William (about six miles apart), the Canadian Pacific Railway gives communication westwards and eastwards, and the Canadian Northern Railway westwards and with the south. A line of railway is being built from these points by the Grand Trunk Pacific Railway to give communication with the Transcontinental Railway.

The approaches to the canals and the channels through the intermediate river reaches are well defined, and are lighted with gas buoys under the control of the Department of Marine and Fisheries, admitting of safe navigation, in the hands of competent pilots, both by day and night. In the cases of the Sault Ste. Marie, the Welland, the Cornwall, the Soulanges and the Lachine, they are well lighted throughout by electricity. The Sault Ste. Marie, the Cornwall and the Soulanges canals are electrically operated. Installations for electrical operation of the Welland Canal and the Lachine Canal are in progres. The Farran's Point Canal is lighted with acetylene gas.

The extensive improvement works being carried on at Port Colborne, the Lake Erie entrance of the Welland Canal, comprise the deepening of the approach to the canal to 22 feet, and the construction of two docks, with piers 200 feet wide, upon which grain elevators will be erected for the transference of grain to vessels adapted to the canal navigation, when required. The Farran's Point canal is lighted by acetylene to the canal navigation, when required.

The foundations for an elevator of 2,000,000 bushels capacity were completed last year, and the work of building the elevator itself is under contract. It is not, however, proposed to afford, at the outset, bin accommodation for more than 800,000 bushels, a capacity which is deemed sufficient as a test of the new system, and pending further information as to the requirements of the grain trade. The plans for construction and equipment are in charge of a special expert in this difficult class of work. In addition to the works undertaken by this department, a breakwater, about a mile in length, has been, and another is being, constructed across the entrance to the harbour by the Department of Public Works, which will also dredge out the area so contained, thus greatly increasing the accommodation and insuring safety at this important point.

The work of deepening the approaches of the Sault Ste. Marie Canal to 31 feet 5 inches below extreme low water mark is nearing completion. When finished a chan-

* In exceptional cases this length can with certain manœuvering, be somewhat increased, being governed, of course, by the form of the vessel. As a matter of fact, there are vessels now using the canals whose length, over all, is 265 feet, and width of beam 37 feet.

nelway 500 feet wide at the upper entrance and 315 feet wide at the lower entrance will be available. The approaches at the lower entrance are completed to that depth. An extension of 800 feet in length with concrete superstructure at the south upper entrance pier is now completed.

The presence of the various dredges and scows in use at the upper entrance for deepening operations has interfered somewhat with the use of the canal, but, notwithstanding, the traffic shows a considerable increase.

On the Trent Canal the section, 9½ miles, comprising the new hydraulic lift lock at Ashburnham (Peterborough), was formally opened for traffic in June, 1904. A second hydraulic lift-lock to overcome a rise and fall of 54 feet is comprised in the Balsam-Simcoe Lake division of the canal, which has now been completed and taken over from the contractors.

A six-foot navigation is thus afforded from Lake Simcoe to Heely's Falls, a distance of 160 miles, leaving the portion between Heely's Falls and Lake Ontario and the portion from Lake Simcoe to Georgian Bay, Lake Huron, still to be dealt with. The total distance between the Bay of Quinté, Lake Ontario and Georgian Bay is about 192 miles.

During the year 1905-06 the surveys carried on with a view to determining the most desirable route for those portions of the projected work that still remain to be constructed in order to give communication between Lake Ontario and Georgian Bay were completed, and the report of the engineer in charge, Mr. E. J. Walsh, was printed in the appendices. The surveys covered the northerly district between Lake Couchiching and Georgian Bay, also the district to the south between Rice Lake and Ontario, having in view as the possible terminal point on the latter lake either Trenton, Cobourg or Port Hope, all three places having urged claims for that distinction.

The final report of the engineer, with plans and estimates, was sent in on the 20th December, 1906, and after full consideration of the several important features of the case demanding attention before coming to a decision, the principal cost both of construction and maintenance (which included liability for unknown damages in the event of a diversion of the waters of the River Trent to meet the requirements of a new outlet at Cobourg or Port Hope), the needs of navigation embracing water supply and harbour facilities, and the potential water powers to be created—the all-river route by the River Trent with outlet at Trenton was was finally adopted by an Order in Council of February 19, 1907; the canal to be of such depth as to give 8 feet 4 inches of water on the mitre sills of the locks.

Plans of the east branch of the Holland River from Holland Landing to Newmarket have been furnished by Mr. Walsh with a view to the improvement of navigation, together with estimates of cost; also plans, profiles and estimates both for a 6-feet and a 9-feet navigation for the section between Georgian Bay and Lake Couchiching via Coldwater and the River Severn.

Surveys are also being conducted for a route to the Georgian Bay via Kempenfeldt Bay, at the southwestern end of Lake Simcoe, and the River Notawasga.

The transfer from the provincial to the Dominion government of the several works comprised in the back lakes forming the head waters of the canal system which was carried out under a provincial order in council of July 22, 1905, and Dominion order of February 16, 1906, has proved of great service in the maintenance of the water supply to the canal; the water being kept at a uniform height throughout the season.

The channelway through the Galops rapids, on the River St. Lawrence, commenced ten years ago, has now, though not carried out to the full depth, 17 feet of navigable waters, originally projected, has reached a point beyond which it is not proposed to go, and the work may be regarded as completed. A channelway has been excavated, 3,000 feet long and 300 feet wide, except at one point, where the width is 248 feet. The points governing the navigable depths are on the Upper Bar, where at the high stage of the river, there is about 14·30 feet of water, a depth which at the abnormally low stage which occurred on November 23, 1901, was reduced to 10·60 feet. It is expected that from 13 feet to 15 feet of water, varying with the season will be afforded by the works now executed. A self-indicating gauge will be established on one of the guide piers at the lower end of the North channel, so that masters of vessels can, at any time, decide whether to use the channel or the canal. It may be observed that the undertaking has naturally been one of extreme difficulty, in view of the necessity for subaqueous drilling, blasting and rock removal in waters of such depth, rapidity of motion and tremendous force, and the results obtained, though not fully up to expectations, have, at all events, afforded an important aid to the navigation of the river at this point. In this connection a massive dam between Adam's Island (Canadian), and Galops Island, which is in the territory of the United States, in order to the removal of a cross current which affected the new channel through the rapids, has been built, and the anticipated good effects upon the current in the channel have resulted from the work, which is completed with the exception of some stone filling in the rear.

In view of the greatly enhanced value of properties in Montreal available for business purposes in the neighbourhood of the Lachine canal, in which increase the canal revenues were not participating, the whole question of rentals for the canal lands and privileges has been carefully examined into by two expert valuators, who have furnished a new basis for rentals, on present values, which will serve as a guide to the department in its future dealings with the subject.

In the report of the Chief Engineer, and in the reports of the superintending engineers, will be found full details as to the operation of the various canals, and as to the progress and position of the works of enlargement and construction now being carried on.

GENERAL OBSERVATIONS.

In my report last year, I urged that, following the usage amongst the leading railway companies of Canada and the United States, some provision be made for recognition of long and faithful service in the cases of men whose further employment on the government railways is, by reason of their age, or otherwise, considered undesirable.

By the Act of last session, chap. 28, assented to on March 22, 1907, the establishment of a fund to be known as 'The Intercolonial and Prince Edward Island Railways Employees Provident Fund' was authorized. The main feature is that a contribution of 1½ per cent of each month's salary and wages will be made by each employee to the fund, to which a like amount will be added by the railway. Interest at 3 per cent per annum will be allowed on the employee's contribution. On retirement, after a certain length of service the employee will receive for the rest of his life a monthly allowance for each year of his service, equal to 1½ per cent of his average monthly salary or wages for the preceding eight years; the mimimum allowance to be $20 a month, and the maximum ¾ of his said average monthly pay. The fund will be administered by a board of five persons, one to be the general manager, two others to be approved by the Minister and selected from the chief officers of the railway, and the remaining two to be elected annually by the contributing employees. The board has been duly constituted.

The usual digest of the operations of railway companies in Canada which, for some years past, has appeared in the departmental reports, is now discontinued, the matter being in the hands of the Comptroller of Railway Statistics, whose statements will be issued separately.

I should be remiss in my duty were I to fail to bring up prominently—though in but general terms of suggestion—the fact that grave problems of railway management and operation are now presenting themselves for consideration, and are demanding solution at an early date on this continent; problems that will not only tax the best practical administrative and engineering minds of the day for their mode of solution, but will also call for an enormous expenditure in money to carry out the remedial measures requisite.

The great question in the development of any rapidly growing country is transportation, and whether transport be conducted by governments or by private companies, the practical difficulties must be met, or the whole country and its commerce will suffer. To a very considerable extent the energy, ingenuity and enterprise of the great railway companies of the United States have, until recently, been able to meet these difficulties by the construction of locomotives of increased power, the building of freight cars of greater capacity, vast additions to their rolling stock of all kinds, the doubling or quadrupling of their tracks, the extension of their yards and terminal and way facilities. Canada on her side, both on her government and private roads, has to a lesser, but still great extent, been confronted with the same difficulties and has met them in like manner. The provisions made by consignees for the reception and handling of freight in cities have not, however, kept pace with the efforts put forward by the railways, and it is much to be desired in the interests of all parties concerned that attention should be given to the subject.

But in both countries, the growth of traffic is so great as to have outsped the means of accommodating it, and, despite the best efforts of those concerned, there has been serious congestion, detrimental to business, and not to be overcome by the greatest good-will on the part of railway companies and of manufacturers of rolling stock, whose resources have been strained to the uttermost.

The remedy can, and will, be found primarily in the amplification and improvement of railway equipments, the ordinary type of which will be bettered and the quantity increased. It is well that this, which is an absolute necessity, should be borne in mind as a class of expenses that must be looked for in the near future.

A feature of traffic which entails much difficulty with the Intercolonial rolling stock is the retention of its freight cars, for prolonged periods, on United States lines. Once sent across the boundary line, they are held and utilized by other roads, and their recovery is a matter of difficulty. This is notably the case with pulpwood, of which, during the nine months ended on March 31, 1907, there was shipped over the Intercolonial Railway to United States points 94,125 tons, in 4,968 cars. For this there appears to be no redress, and, until the manufacture of raw material is more general in Canada than at present, may be expected to continue.

A very important feature of difficulty in railway operation as regards the movement of freight results from the statutory provision known as the Lord's Day Observance Act, being the Act of 1906, chap. 27. Speaking from the point of view of the Intercolonial only, I may say that the effect of this enactment is to reduce the working capacity of the locomotive and rolling stock of the road by about one-eighth, through enforced idleness, and further to increase, by a proportional amount, the demands on the service on week days to make up for this period of inaction. As a consequence, a very large addition must be made to the locomotive and car supply solely to cover this additional strain, together with the provision of larger yards to hold the necessary additional stock, apart from any consideration of increased requirements on other grounds.

In the case of the canals, it has been found absolutely necessary, season after season, to keep them open on Sundays towards the close of the year, in order to meet the requirements of an ever-increasing traffic.

The question is, no doubt, one of considerable complication and will, some day, as the difficulty becomes more accentuated, demand a modification of the restriction. Meantime, I merely point out the position as at present existing.

I desire to draw attention to the time that is consumed yearly by the officers of the Intercolonial in preparing the voluminous returns called for by parliament, time that is urgently needed for the normally extensive work of the road, which must be set aside for the returns work. Much of this extra work could be dispensed with if the applicant member of parliament would kindly state clearly the special point upon which information is desired; a few hours or minutes would then enable the officials to supply it, in place of consuming days or weeks in compiling details which are, after all, irrelevant to the matter in hand, and in no way used by him. Apart from the hindrance to the regular work, so caused, the expense of preparing these documents is considerable.

Another feature of the present era is the attention that is being bestowed on inland water transport by means of canal construction, and the utilization of lakes and rivers in that connection.

With the advent of the propellor and the cheap steel vessel or barge, vast possibilities have arisen, and perhaps nowhere have these been taken advantage of more than at the Sault Ste. Marie canals, giving access to and from Lake Superior. Trough these canals during the season of 1906, a fleet of 879 vessels carried 51,751,080 tons of freight; 57 of these vessels were from 500 to 600 feet in length, and of from 52 to 60 feet beam; 48 of them being of from 10,000 to 14,000 tons capacity. The average distance of transportation was 842 4 miles and the average cost for transport per mile per ton was 0·84 mills; $36,666,889.06 was paid for transportation. These figures indicate the importance of the subject, particularly when it is borne in mind that the entire railway freight traffic of Canada for the year 1905-6 was only $57,966,713 tons.

With such facile transport, at rates lower by one-half or one-third than railway carriage, with all its infinite complications, affords, it is not to be wondered at that projects for extension of canal service are being everywhere put forward. In the United States, in addition to the enlargement of the Erie canal, there is the vast project of a waterway between the Great Lakes and the Gulf of Mexico via the basin of the River Mississippi, a 14-foot ship channel, 1,500 miles long, of which the first 40 miles from Chicago to Joliet are already completed; for a further distance of 230 miles to St. Louis, the plans are ready, and a large portion of the balance is under survey. The Panama canal is another of the great waterway schemes under construction. In England a Royal Commission has been appointed to consider the question of canal development, and one of its members, last year, visited this country for the purposee of acquiring information on the subject, one in which Canada has attained exceptional experienee, and this department was enabled to afford him all facilities in the matter. In various European countries, the waterway is being looked to for relief in the congestion present there.

That Canada will, before long, be called upon to make further extensions and improvements in this direction is certain, in order to meet the demands of her fast increasing population, her commerce, and the rapid expansion of her western civilization.

What form that action will take is as yet undertermined. The construction of a 20-foot navigation from Georgian bay, Lake Huron to Montreal via the River Ottawa is a scheme that has been much discussed, and a considerable amount of preliminary survey work has been done under the Public Works Department. Then, again, there is the suggestion of the enlargement of the Welland canal, thus allowing the larger class of steamers to reach Prescott, and, thence, by the utilization of properly designed barges, to admit of the economical transport of the products of the west to the seagoing vessels at Montreal. I merely mention the above facts, to prepare the way for the inevitable measures that will be requisite in the near future, without reference to projects that may ultimately arise in connection with the water communications of Western Canada, as that growing section of the country expands.

I venture to submit that before any action is taken with reference to the Georgian Bay Ship canal, or the enlargement of the Welland, it would be advisable

that a commission should be appointed for the purpose of studying the economic problems involved, and of reporting thereon for the benefit of the government and the country. This commission should, in my opinion, consist of not more than three persons, one of whom should be a business man of large experience, one to represent the marine interests of the country, familiar with the size of ships and the various problems involved in the actual conduct of lake transport, and the third, an engineer of wide experience, one familiar with both rail and water transportation.

I have the honour to be, Sir,
Your obedient servant,

M. J. BUTLER,
Deputy Minister of Railways and Canals.

PART I

STATEMENTS OF THE ACCOUNTANT

No. 1.

STATEMENT showing the amount expended by the Department of Railways and Canals, Dominion of Canada, during the Fiscal Period of Nine Months ended March 31, 1907.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	CHARGEABLE TO REVENUE.	
			Staff.	Repairs.
CANALS.	$ cts.	$ cts.	$ cts.	$ cts.
Beauharnois		598 64	7,552 02	11,711 09
Carillon.. Grenville..		9,393 38	16,749 03	7,036 40
Chambly		29,953 80	19,916 33	22,508 88
Cornwall	5,218 03	4,191 61	52,050 56	24,489 18
Lachine	18,840 85	65,872 25	53,308 14	47,465 20
Murray		10,423 00	2,788 14	1,710 55
Rideau		14,322 03	30,667 34	44,627 82
Sault Ste. Marie	95,504 63		12,290 94	11,520 53
Soulanges	13,508 88	3,216 29	19,964 04	15,604 71
Ste. Anne		2,449 96	1,595 62	901 47
St. Lawrence... North Channel	61,528 34			
St. Lawrence... Galops Channel	13,350 00			
St. Ours		4,200 00	2,064 62	1,142 79
St. Peter's			2,468 78	246 87
Trent	153,045 42	35,360 10	19,229 25	36,516 47
Welland	480,305 03	56,036 47	75,031 24	53,247 50
Williamsburg... Galops	45,782 52	18,405 65	13,953 58	8,501 57
Williamsburg... Rapide Plat	754 91			
Total	887,838 61	254,423 18	329,629 63	287,231 03
GENERAL ON CANALS.				
Dredge vessels—Lachine				4,997 54
Dredge vessels—Rideau				6,941 78
Miscellaneous		2,815 82	958 59	95 84
Salaries and contingencies, canal officers			20,343 35	
Sunday labour			19,336 80	
Surveys and inspections		943 58		
Quebec Canals—Maintenance			13,577 37	
Quebec Canals—Remarking boundaries		1,487 42		
Quebec Canals—To build two flat scows		4,440 73		
Total		9,687 55	54,216 11	12,035 16
RAILWAYS.				
Intercolonial	1,506,209 26		6,030,171 83	
National Transcontinental	5,537,867 50			
Prince Edward Island	91,710 52		283,148 50	
Windsor Branch			15,425 32	
Total	7,135,787 28		6,328,745 65	

NOTE:—Up to and including the year 1906 the Fiscal year ended June 30th, after which the closing date is March 31st.

STATEMENT showing the amount expended by the Department of Railways and Canals, &c.— *Concluded.*

Name of Work.	Chargeable to Capital.	Chargeable to Income.	CHARGEABLE TO REVENUE.	
			Staff.	Repairs.
GENERAL ON RAILWAYS.	$ cts.	$ cts.	$ cts.	$ cts.
Contribution to McGill College		2,500 00		
Railway statistics		3,529 58		
Railway subsidies		1,323,367 48		
Governor General's car	38,582 89	104 88		
Railway Commission		68,664 29		
Subscription to Railway Congress, Brussels		97 33		
Surveys and inspections		15,719 54		
Government Director Grand Trunk Pac. Ry.		1,500 00		
Total	38,582 89	1,415,483 10		
MISCELLANEOUS.				
Cost of litigation		3,736 14		
Extra clerks preparing returns to Parliament		200 26		
Salaries of engineers, draughtsmen, &c		25,288 10		
" extra clerks, &c		2,454 15		
Expenses of Governor General to Provinces of Saskatchewan and Alberta		2,271 78		
Gratuity to representatives of late L W. Armstrong		91 66		
Gratuity to representatives of late M. O'Neil		141 66		
Total		34,183 75		
RECAPITULATION.				
Total on canals	887,838 61	254,423 18	329,629 63	287,231 03
" general		9,687 55	54,216 11	12,035 16
Total on canals	887,838 61	264,110 73	383,845 74	299,266 19
Grand total canals, $1,835,061.27				
Total on railways	7,135,787 28		6,328,745 65	
" general	38,582 89	1,415,483 10		
Total on railways	7,174,370 17	1,415,483 10	6,328,745 65	
Grand total railways, $14,918,598.92				
Grand totals railways and canals, including miscellaneous, $34,183.75	8,062,208 78	1,713,777 58	6,712,591 39	299,266 19

Total amount expended, $16,787,843.94.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, July 5, 1907.

No. 2.

STATEMENT showing the amount expended on Construction, Renewals, Ordinary Repairs and Working Staff of the Canals of the Dominion of Canada, up to March 31, 1907.

ST. PETER'S CANAL.

—	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	.....	156,523 32	.....	.....	.....
" since " ..	1868	21,519 72	.....	.....	.....
" " " ..	1869	70,719 80	.....	.....	.....
" " " ..	1870	.....	46,193 57	.....	.....
" " " ..	1871	.....	.....	225 36	555 78
" " " ..	1872	.....	.....	280 00	6,122 07
" " " ..	1873	.....	.....	343 32	6,539 58
" " " ..	1874	.....	.....	725 93	1,558 57
" " " ..	1875	20 97	.....	560 00	889 35
" " " ..	1876	11,125 00	.....	641 55	.....
" " " ..	1877	63,330 18	.....	600 00	17 45
" " " ..	1878	26,511 51	.....	600 00	.....
" " " ..	1879	107,337 75	.....	631 50	.....
" " " ..	1880	80,120 54	.....	400 00	.....
" " " ..	1881	69,434 76	.....	959 58	.....
" " " ..	1882	484 00	.....	1,920 54	200 63
" " " ..	1883	.....	.....	2,089 19	232 42
" " " ..	1884	2,471 40	.....	2,601 47	367 85
" " " ..	1885	16,820 15	.....	1,929 11	183 11
" " " ..	1886	2,316 85	.....	2,360 67	297 81
" " " ..	1887	1,087 75	750 00	2,777 13	343 23
" " " ..	1888	.....	.....	3,217 77	1,588 40
" " " ..	1889	.....	500 00	3,085 29	353 38
" " " ..	1890	.....	.....	3,110 15	255 34
" " " ..	1891	972 65	510 53	3,255 30	312 02
" " " ..	1892	14,387 00	30,936 82	3,007 70	1,461 24
" " " ..	1893	811 59	9,987 78	2,938 15	1,856 30
" " " ..	1894	437 05	3,852 21	2,935 94	1,986 70
" " " ..	1895	868 44	26,222 46	2,499 81	353 55
" " " ..	1896	1,455 21	16,743 64	2,182 04	260 90
" " " ..	1897	.....	.....	2,728 38	1 20
" " " ..	1898	.....	111 70	2,785 25	453 85
" " " ..	1899	.....	.....	2,819 86	456 61
" " " ..	1900	.....	.....	2,833 24	1,483 30
" " " ..	1901	.....	2,311 26	2,730 44	841 63
" " " ..	1902	.....	10,014 43	2,939 81	274 44
" " " ..	1903	.....	.....	2,836 49	764 11
" " " ..	1904	.....	.....	3,126 94	122 45
" " " ..	1905	.....	3,000 10	2,969 90	1,095 90
" " " ..	1906	.....	.....	3,239 19	253 65
" " " ..	1907	.....	.....	2,468 78	246 87
		648,755 64	.....	.....	.....
Less—Refunds of previous years.....	.....	208 50	.....	.....	.....
Total	.....	*648,547 14	151,134 50	77,355 78	31,729 69

* Expenditure as above..... $ 648,547 14
Less expenditure prior to Confederation..... 156,523 32

Agreeing with Public Accounts, 1907, page 4.... $ 492,023 82

W. C. LITTLE,
Accountant

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

BAIE VERTE CANAL.

	Year ending.	Capital.	Income.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" since "	1868		
" " "	1869		
" " "	1870		
" " "	1871		17,929 34
" " "	1872		6,399 41
" " "	1873		14,943 83
" " "	1874		4,018 90
" " "	1875		443 00
" " "	1876		110 75
" " "	1877		22 30
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		520 00
" " "	1882		
" " "	1883		
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" " "	1905		
" " "	1906		
" " "	1907		
Total			44,387 53

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

LACHINE CANAL.

——	Year ending.	Capital.		Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Expenditure by Imperial Government	....	40,000 00				
Government expenditure prior to Confederation	....	2,547,532 85				
Government expenditure since Confederation	1868			1,852 70	13,742 05	10,431 51
" "	1869	2,000 00			14,209 02	12,085 84
Cost of original construction and enlargement from 1845 to 1848			2,589,532 85			
Expenditure by Dominion Government	1870				15,834 49	13,302 39
" "	1871			12,231 40	17,478 52	15,093 25
" "	1872	36,708 15			16,076 93	12,334 69
" "	1873	7,824 28		35,158 21	23,601 03	34,300 60
" "	1874	158,618 35			25,811 07	22,828 66
" "	1875	197,420 52			28,592 01	30,057 34
" "	1876	327,769 39			33,797 73	29,103 65
" "	1877	1,439,375 73			33,148 86	19,824 33
" "	1878	1,484,619 63			39,062 97	13,646 41
" "	1879	958,053 30			42,338 84	12,400 78
" "	1880	369,566 74			38,950 90	10,223 62
" "	1881	292,165 51			39,027 99	19,888 33
" "	1882	252,821 33		2,978 66	41,158 90	17,116 46
" "	1883	396,496 96		1,859 68	45,554 91	18,199 59
" "	1884	188,266 18			48,624 51	19,683 24
" "	1885	111,215 23			49,004 85	20,199 78
" "	1886	210,509 42			50,969 10	19,199 18
" "	1887	28,772 52		12,981 59	53,113 97	22,567 81
" "	1888	19,414 34		7,996 38	52,229 61	19,999 64
" "	1889	76,032 96		972 71	54,110 67	22,957 71
" "	1890	7,448 03		8,238 46	53,114 34	22,999 38
" "	1891	217 53		16,155 75	50,721 69	36,292 98
" "	1892	87,852 35		27,480 80	52,729 37	67,499 62
" "	1893	445,983 21		50,937 40	53,185 00	51,616 79
" "	1894	64,345 14		17,152 48	60,174 03	40,939 70
" "	1895	189,944 36		32,405 20	56,337 44	25,891 45
" "	1896	184,998 25		8,193 15	58,342 96	24,950 20
" "	1897	282,052 48		14,664 21	57,533 20	25,820 73
" "	1898	216,717 44		819 62	57,282 50	33,391 92
" "	1899	162,351 83		3,103 99	55,990 00	35,776 90
" "	1900	125,009 41		12,210 88	56,791 45	31,988 81
" "	1901	97,305 52		12,072 87	58,364 29	50,005 48
" "	1902	113,328 26		36,249 02	59,435 33	45,853 97
" "	1903	58,426 92		109,893 43	69,762 03	53,054 20
" "	1904	181,487 06		162,705 14	77,233 17	50,660 92
" "	1905	112,460 47		144,996 37	86,209 93	65,202 42
" "	1906	103,798 28		133.518 77	84,708 78	60,064 84
" "	1907	18,840 85		65,872 25	53,308 14	47.465 20
Cost of enlargement	....		9,008,217 93			
Total	....		11,597,750 78	932,701 12	1,877,662 58	1,184,920 32

Total expenditure on capital account as above $11,597,750 78
Less charged to St. Lawrence River Canals, see page 9 ..... $2,950,104 15
Less expenditure by Imperial Government 40,000 00
2,990,104 15

Agreeing with Public Accounts balance sheet, 1907, page 4 ..... $ 8,607,646 63

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

BEAUHARNOIS CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		1,611,424 11			
" since "	1868		63,193 75	9,349 99	6,216 98
" " "	1869		55 00	9,626 99	6,498 57
" " "	1870		27 50	10,117 57	6,384 81
" " "	1871			12,316 53	5,722 36
" " "	1872		27 50	11,792 46	15,733 38
" " "	1873		5,122 50	12,210 73	9,882 06
" " "	1874		26 00	15,392 51	10,990 56
" " "	1875		36 00	14,399 32	12,253 01
" " "	1876			14,465 86	17,170 83
" " "	1877			14,377 63	15,207 36
" " "	1878			14,383 37	9,861 05
" " "	1879			15,015 86	10,370 71
" " "	1880	266 15		15,362 61	8,997 34
" " "	1881			17,659 93	10,770 67
" " "	1882			18,804 53	20,813 86
" " "	1883		6,727 44	18,287 77	15,826 71
" " "	1884		3,277 98	19,107 38	16,232 61
" " "	1885		7,999 79	18,960 40	14,637 70
" " "	1886		8,491 80	19,228 90	14,356 00
" " "	1887		3,633 57	18,867 45	14,999 88
" " "	1888		14,411 97	19,325 05	14,285 98
" " "	1889		10,993 52	20,019 11	14,982 54
" " "	1890			19,847 42	14,999 20
" " "	1891		17,085 68	18,885 86	12,537 39
" " "	1892		1,696 23	20,050 01	14,999 80
" " "	1893			20,348 34	14,107 11
" " "	1894		6,547 72	20,574 53	13,903 46
" " "	1895		27,982 93	20,428 59	12,299 49
" " "	1896			20,725 47	15,050 85
" " "	1897		9,813 15	21,012 64	14,862 98
" " "	1898	25,000 00	5,799 34	20,650 00	16,164 92
" " "	1899		1,000 00	20,613 22	13,463 01
" " "	1900		4,959 22	20,147 59	14,505 30
" " "	1901		483 40	20,118 42	14,199 12
" " "	1902			16,682 52	6,532 33
" " "	1903			8,218 14	10,063 38
" " "	1904			9,236 27	11,936 37
" " "	1905		14,949 83	9,086 68	10,499 99
" " "	1906		2,531 24	9,291 91	18,640 71
" " "	1907		598 64	7,552 02	11,711 09
Total		*1,636,690 26	217,471 70	642,542 58	512,671 47

* See page 9 for total cost of St. Lawrence River and Canals.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

ST. LAWRENCE RIVER AND CANALS, SURVEYS, &c.

	Year ending.	Chargeable to Capital.				Chargeable to Income.
		North Channel.	River Reaches.	Galops Channel.	Total.	
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation					18,442 85	98,378 46
Government expenditure since Confederation	1868					
" "	1869					
" "	1870					
" "	1871					
" "	1872					
" "	1873				33,241 69	
" "	1874				26,541 30	
" "	1875				20,611 36	
" "	1876				50,215 47	
" "	1877				47,377 31	
" "	1878				5,570 46	
" "	1879				9,265 77	
" "	1880				9,214 56	
" "	1881				6,927 96	
" "	1882		6,933 45	22,000 00	28,933 45	
" "	1883		3,574 31	41,300 00	44,874 31	
" "	1884		15,546 03	74,300 00	89,846 03	
" "	1885		13,710 17	101,400 00	115,110 17	
" "	1886		16,251 73	99,800 00	116,051 73	
" "	1887		20,037 31	54,400 00	74,437 31	
" "	1888		16,082 85	40,400 00	56,482 85	
" "	1889		1,293 92	17,200 00	18,493 92	
" "	1890		18,279 91	5,700 00	23,979 91	
" "	1891		35,137 25		35,137 25	
" "	1892		59,779 31		59,779 31	
" "	1893		52,643 39		52,643 39	
" "	1894		13,721 66		13,721 66	
" "	1895		1,223 72	181,552 03	182,775 75	
" "	1896		7,457 05		7,457 05	
" "	1897		12,347 31		12,347 31	
" "	1898	171,336 65	7,491 11	32,710 00	211,537 76	
" "	1899	461,979 50	9,366 47	42,430 00	513,775 97	
" "	1900	225,000 00	72,484 41	50,000 00	347,484 41	
" "	1901	184,790 34	19,389 75	91,211 97	295,392 06	
" "	1902	125,000 00	29,268 64	24,037 85	178,306 49	
" "	1903	126,833 94	16,432 28	25,000 00	168,266 22	
" "	1904	68,595 42	9,634 66	6,450 00	84,680 08	
" "	1905	93,025 89	25,743 51	49,734 70	168,504 10	
" "	1906	83,028 98		26,506 26	109,535 24	
" "	1907	61,528 34		13,350 00	74,878 34	
Total		1,601,119 06	483,830 20	999,482 31	3,311,840 80	98,378 46

ST LAWRENCE RIVER AND CANALS.

St. Lawrence River and Canals, as above		$ 3,331,840 80
Beauharnois Canal, *see* page 8		1,636,690 26
Cornwall Canal " 12		7,224,284 70
Williamsburg Canal " 14		10,373,311 29
Lake St. Louis " 10		298,176 11
Soulanges Canal " 26		6,904,683 58
Lachine Canal, from prior to Confederation to June 30, 1875, *see* page 7		2,950,104 15
Lake St. Francis, *see* page 11		75,906 71
Agreeing with Public Accounts balance sheet, 1907, page 4		$32,774,997 60

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

LAKE ST. LOUIS.

	Year ending.	Chargeable to Capital.	Chargeable to Revenue.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" " since "	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
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" " " "	1893		
" " " "	1894		
" " " "	1895	4,753 14	
" " " "	1896	49,909 31	
" " " "	1897	73,300 41	
" " " "	1898	64,495 83	
" " " "	1899	57,607 79	
" " " "	1900	11,765 70	
" " " "	1901	12,918 31	
" " " "	1902	6,000 00	
" " " "	1903	9,508 72	
" " " "	1904	7,916 90	
" " " "	1005	†	
" " " "	1906	†	
" " " "	1907	†	
Total.		*298,176 11	

* Included in total cost of St. Lawrence River and Canals, *see* page 9.
† Transferred to Department of Marine and Fisheries.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

LAKE ST. FRANCIS.

——	Year ending.	Capital.	Renewals Chargeable to Income.
		$ cts.	$ cts.
Government expenditure since Confederation	1868		
" " " "	1869		
" " " "	1870		
" " " "	1871		
" " " "	1872		
" " " "	1873		
" " " "	1874		
" " " "	1875		
" " " "	1876		
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" " " "	1893		
" " " "	1894		
" " " "	1895		
" " " "	1896		
" " " "	1897		
" " " "	1898	3,420 00	
" " " "	1899	23,110 00	
" " " "	1900	15,431 46	12,288 39
" " " "	1901	15,000 00	8,060 30
" " " "	1902	13,945 25	
" " " "	1903	5,000 00	
" " " "	1904		2,199 52
" " " "	1905	†	
" " " "	1906	†	
" " " "	1907	†	
Total		*75,906 71	22,548 21

* Included in total cost of St. Lawrence River and Canals, *see* page 9.
† Transferred to Department of Marine and Fisheries.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

CORNWALL CANAL.

—	Year ending.	Chargeable to Capital.		Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		1,933,152 69				
Government expenditure since Confederation	1868			2,786 00	11,244 47	3,774 18
" "	1869	10,692 04			10,347 91	3,859 14
" "	1870			17,780 05	10,368 16	7,145 42
" "	1871			7 50	11,848 39	8,891 61
" "	1872			10,000 21	10,594 30	8,163 70
" "	1873			1,011 75	13,042 25	12,467 65
" "	1874				13,405 20	7,610 70
" "	1875	1,780 00			13,351 91	7,097 34
Cost of original construction			1,945,624 73			
Expenditure by Dominion Government	1876				13,320 61	6,423 67
" "	1877	49,211 37			13,375 70	6,440 54
" "	1878	145,015 45			13,825 50	4,935 21
" "	1879	143,092 05			13,817 96	4,983 15
" "	1880	109,454 95			14,440 33	9,735 76
" "	1881	53,948 14			15,173 60	5,524 10
" "	1882	44,587 61			15,052 20	6,634 62
" "	1883	21,728 93			18,283 67	8,361 71
" "	1884	22,018 13			18,475 48	9,007 73
" "	1885	62,034 90		16,298 96	15,988 96	12,368 51
" "	1886	57,820 83		6,960 95	15,994 80	11,832 83
" "	1887	46,966 43			17,520 54	12,100 29
" "	1888	67,945 74			16,938 54	13,942 64
" "	1889	163,993 85			17,890 55	58,205 26
" "	1890	365,038 01		2,000 00	17,063 49	12,758 18
" "	1891	599,001 85		1,459 98	16,077 72	9,830 05
" "	1892	398,555 25		2,345 26	15,596 66	9,864 36
" "	1893	352,536 13			15,173 01	9,668 14
" "	1894	404,990 22			15,344 02	7,733 54
" "	1895	450,689 65		21,497 74	15,414 56	13,053 55
" "	1896	448,408 31		2,175 00	15,472 26	25,259 56
" "	1897	438,487 51			15,540 43	16,438 32
" "	1898	133,208 96			15,011 50	15,431 02
" "	1899	37,649 00		15,960 80	16,000 00	14,623 90
" "	1900	169,889 51		18,547 50	18,798 10	13,998 29
" "	1901	62,032 47			17,104 13	13,166 89
" "	1902	90,535 18			17,896 58	15,045 95
" "	1903	77,833 81			70,129 29	19,205 66
" "	1904	113,795 16		1,730 16	45,792 64	20,932 55
" "	1905	104,093 45		8,324 83	71,073 68	28,100 67
" "	1906	37,879 09		20,063 79	71,246 77	31,893 13
" "	1907	5,218 03		4,191 61	52,050 56	24,489 18
Cost of enlargement			5,278,659 97			
Total			*7,224,284 70	153,142 09	835,086 43	530,998 70

* Included in total cost of St. Lawrence River and Canals, *see* page 9.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

WILLIAMSBURG CANALS.

	Year ending.	Capital.				Renewals Chargeable to Income.	Staff.	Repairs.
		Farran's Point.	Galops.	Rapide Plat.	Total.			
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation being amount of original construction					1,326,655 54			
Government expenditure since Confederation	1868						5,745 97	6,442 41
" " "	1869						5,769 81	5,670 88
" " "	1870						5,573 13	6,546 16
" " "	1871						6,382 17	5,308 41
" " "	1872					1,077 00	5,542 94	3,230 07
" " "	1873						6,424 49	7,347 75
" " "	1874						6,857 19	7,395 92
" " "	1875						6,547 62	4,110 29
" " "	1876						7,418 39	11,690 98
" " "	1877						7,388 68	10,053 61
" " "	1878						7,430 11	4,449 78
" " "	1879						7,517 20	3,549 71
" " "	1880						7,590 15	3,999 77
" " "	1881						7,572 35	5,020 73
" " "	1882						7,589 44	7,447 69
" " "	1883				13 19		7,423 48	7,299 39
" " "	1884				2,473 44		7,757 04	7,349 37
" " "	1885		70,764 07	32,473 05	103,237 12		7,696 67	8,198 03
" " "	1886		78,014 92	71,820 79	149,835 71		7,671 54	7,847 05
" " "	1887		32,862 02	82,990 98	115,853 00		7,635 54	7,904 76
" " "	1888		16,628 95	53,499 34	70,128 29	1,613 67	7,646 79	8,190 13
" " "	1889		37,661 15	22,206 11	59,867 26		7,485 28	8,794 61
" " "	1890		126,417 42	12,660 95	139,078 37		8,954 53	8,191 69
" " "	1891	2,853 76	172,779 88	55,036 96	230,670 60		8,678 25	7,987 40
" " "	1892		218,511 17	158,034 15	376,545 32	797 83	9,458 33	8,551 32
" " "	1893		151,524 01	217,669 28	372,193 29	3,675 00	8,676 03	8,347 97
" " "	189 4		223,992 81	274,397 42	498,390 23		10,230 09	7,029 95
" " "	1895		118,464 53	228,892 70	347,357 23	13,720 36	9,675 09	7,371 37
Carried forward		2,853 76	1,250,620 93	1,209,681 73	3,786,298 59	20,883 86	210,337 70	195,327 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

WILLIAMSBURG CANALS—*Continued.*

——	Year ending.	Capital.				Renewals Chargeable to Income.	Staff.	Repairs.
		Farran's Point.	Galops.	Rapide Plat.	Total.			
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward		2,853 76	1,250,620 93	1,209,681 73	3,786,298 59	20,883 86	210,337 70	195,327 20
Government expenditure since Confederation	1896	4,980 00	150,744 16	286,396 96	442,121 12	8,607 04	9,588 51	9,036 00
" " "	1897	.....	262,795 78	205,480 55	468,274 33	3,880 76	8,697 54	8,210 71
" " "	1898	231,321 44	734,492 07	116,072 55	1,081,886 06	.....	10,708 66	8,032 84
" " "	1899	346,956 54	987,186 44	57,869 18	1,392,012 16	7,410 00	9,960 64	10,000 00
" " "	1900	100,534 64	752,799 27	14,298 74	867,632 65	4,137 04	11,092 06	10,897 79
" " "	1901	111,158 39	390,112 78	76,501 57	577,772 74	.....	12,342 32	11,755 09
" " "	1902	42,209 89	421,945 81	137,818 22	601,973 92	.....	14,403 28	13,673 26
" " "	1903	10,266 92	320,354 92	18,483 34	349,105 18	.....	15,246 91	20,092 79
" " "	1904	18,700 00	256,536 30	26,774 27	302,010 57	1,978 85	20,570 17	19,430 05
" " "	1905	8,108 99	292,337 29	8,109 98	{ 8,209 63 / 308,556 26 }	5,573 69	23,399 45	21,492 46
" " "	1906	.....	140,920 65	.....	140,920 65	20,493 00	17,289 42	16,148 66
" " "	1907	.....	45,782 52	754 91	46,537 43	18,405 65	13,953 58	8,501 57
Totals		877,090 57	6,006,626 92	2,158,242 00	*10,373,311 29	91,369 89	377,590 24	352,598 42

* Original construction ..... $ 1,320,655 54
Cost of enlargement 9,052,655 75

Total $10,373,311 29

Included in total cost of St. Lawrence River and Canals, page 9.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

WELLAND CANAL.

—	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Imperial Government		222,220 00			
Government expenditure prior to Confederation		7,416,019 83			
" since "	1868	12,097 84		37,679 05	38,852 96
" " "	1869	43,486 36		39,060 61	50,773 03
" " "	1870		22,173 72	40,340 45	65,009 19
" " "	1871		48,569 10	42,383 33	53,381 02
" " "	1872	53,680 32	6,022 44	37,085 37	50,276 90
" " "	1873	82,282 20	47,876 27	45,382 99	66,550 73
" " "	1874	746,420 61		50,966 48	103,666 99
" " "	1875	1,047,119 91		52,595 00	88,539 99
" " "	1876	1,569,478 19	700 00	57,623 31	81,376 12
" " "	1877	2,199,962 61		59,963 47	49,783 93
" " "	1878	2,138,392 99		60,138 59	66,393 53
" " "	1879	1,552,697 41		59,942 23	56,755 57
" " "	1880	1,252,924 75		63,198 10	76,535 25
" " "	1881	1,242,943 37	6,593 19	56,398 04	69,249 53
" " "	1882	603,402 17	13,664 80	74,641 51	84,374 97
" " "	1883	549,433 29	5,979 03	109,207 21	72,707 62
" " "	1884	432,336 21		113,276 87	90,926 97
" " "	1885	463,505 38	6,150 21	112,670 00	91,534 66
" " "	1886	215,380 75	1,359 00	111,660 22	69,507 48
" " "	1887	1,071,073 87	3,828 67	109,371 69	77,440 80
" " "	1888	429,720 94	10,740 86	110,806 01	86,518 97
" " "	1889	225,910 21	43,803 80	113,587 05	77,547 77
" " "	1890	117,633 22	51,648 28	109,202 02	72,686 19
" " "	1891	36,371 03	19,767 73	107,662 63	82,548 30
" " "	1892	29,541 21	9,008 80	104,673 73	73,771 87
" " "	1893	8,259 94	25,103 13	104,926 73	65,016 84
" " "	1894	1,571 78	13,430 20	102,018 80	53,053 71
" " "	1895	3,809 35	24,245 02	90,438 07	48,270 94
" " "	1896	1,677 67	18,768 99	87,988 11	62,542 64
" " "	1897	2,282 35	22,283 06	88,095 20	41,247 81
" " "	1898		34,803 25	84,806 54	59,571 66
" " "	1899		30,099 84	86,110 88	56,270 60
" " "	1900	18,167 29	37,164 84	84,888 36	59,507 64
" " "	1901	224,536 96	87,777 43	86,889 24	72,055 89
" " "	1902	303,997 81	78,905 37	88,048 95	69,279 90
" " "	1903	315,819 49	94,127 21	90,684 05	72,004 59
" " "	1904	555,751 00	31,140 58	91,115 35	85,717 88
" " "	1905	890,457 82	34,559 42	91,928 96	111,418 62
" " "	1906	715,198 24	28,799 66	107,932 96	78,704 93
" " "	1907	480,305 03	56,036 47	75,031 24	53,247 50
Total		* 27,275,869 40	915,130 37	3,240,419 40	2,784,621 49

* Total expenditure as above	$ 27,275,869 40
Less expenditure by Imperial Government	222,220 00
Agreeing with Public Accounts Balance Sheet, 1907, page 4	$ 27,053,649 40

Original cost of construction, including first enlargement	$ 7,693,824 03
Enlargement, including new Welland Canal	19,582,045 37
Total expenditure as above	$ 27,275,869 40

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

STE. ANNE'S LOCK AND CANAL.

—	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		134,456 51			
" since " "	1868			778 16	432 47
" " " "	1869			1,062 96	1,873 51
" " " "	1870			1,136 54	1,280 36
" " " "	1871			1,285 84	1,539 02
" " " "	1872		1,939 46	1,106 80	1,393 63
" " " "	1873		540 11	2,199 64	1,264 40
" " " "	1874	12,753 27		2,614 90	7,208 63
" " " "	1875	32,627 71		1,859 20	4,506 68
" " " "	1876	24,935 85		1,952 14	4,033 72
" " " "	1877	30,003 08		1,982 65	1,756 93
" " " "	1878	14,618 85		2,057 32	541 95
" " " "	1879	22,113 02		2,202 03	3,259 70
" " " "	1880	3,054 68		2,152 57	1,704 71
" " " "	1881	69,042 76		2,553 02	3,257 92
" " " "	1882	193,158 36		2,611 30	2,343 99
" " " "	1883	172,959 95		2,569 86	3,448 83
" " " "	1884	142,006 25		2,775 32	2,725 49
" " " "	1885	93,679 57		2,618 60	4,042 04
" " " "	1886	129,681 67		2,611 90	5,803 01
" " " "	1887	45,276 08	6,054 10	2,537 41	1,499 96
" " " "	1888	18,910 55	1,372 59	2,505 61	1,380 75
" " " "	1889	24,786 33		2,569 22	1,730 79
" " " "	1890	6,151 14		2,571 04	1,525 51
" " " "	1891		8,173 69	2,505 69	1,503 56
" " " "	1892		25,471 61	2,571 28	1,666 21
" " " "	1893		6,521 88	2,581 08	2,800 03
" " " "	1894		3,497 56	2,640 00	2,799 63
" " " "	1895		3,694 33	2,508 14	3,025 91
" " " "	1896			2,495 54	4,993 89
" " " "	1897			2,357 51	1,688 12
" " " "	1898			1,904 10	1,699 44
" " " "	1899			1,920 12	1,997 96
" " " "	1900			1,840 51	2,679 21
" " " "	1901			1,895 89	3,999 02
" " " "	1902			1,994 52	3,015 97
" " " "	1903		1,984 39	2,072 17	4,684 42
" " " "	1904			2,292 94	2,244 13
" " " "	1905			2,151 01	6,091 44
" " " "	1906			2,259 16	2,294 86
" " " "	1907		2,449 96	1,595 62	901 47
Total		*1,170,215 63	61,699 68	85,899 31	106,639 27

* Included in total cost of Ottawa River Works, see page 19.

Original construction	$ 134,456 51
Enlargement, including new lock	1,035,759 12
	$ 1,170,215 63

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

CARILLON AND GRENVILLE CANAL.

—	Year ending	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Imperial Government		*			
Government expenditure prior to Confederation		63,053 64			
" since " "	1868		19,817 22	6,301 88	8,911 28
" " " "	1869			6,549 38	10,157 42
" " " "	1870		4,167 96	6,617 81	9,852 09
" " " "	1871		23,119 37	8,676 90	8,218 24
" " " "	1872	165,257 28		8,324 51	17,235 31
" " " "	1873	133,199 10	3,051 38	10,068 28	8,781 50
" " " "	1874	245,258 38		10,710 88	10,605 82
" " " "	1875	339,864 76		10,378 57	18,520 44
" " " "	1876	326,203 16		10,764 38	11,475 96
" " " "	1877	245,738 04		11,050 27	10,304 06
" " " "	1878	22,676 20		11,401 30	5,082 72
" " " "	1879	243,141 24		11,501 22	7,629 98
" " " "	1880	281,514 27		11,959 14	7,625 54
" " " "	1881	336,707 53		13,059 18	8,076 91
" " " "	1882	433,084 39		14,387 49	7,582 68
" " " "	1883	433,575 10		17,479 58	8,310 02
" " " "	1884	399,267 16		17,393 91	7,918 42
" " " "	1885	157,187 72		19,702 30	10,429 26
" " " "	1886	104,973 24	75 00	20,597 82	9,303 31
" " " "	1887	20,747 11		20,011 36	10,554 41
" " " "	1888	38,996 29		21,531 12	10,036 62
" " " "	1889	298 17		22,098 88	10,135 66
" " " "	1890	17 58	4,526 61	15,896 16	7,582 38
" " " "	1891		4,395 25	21,230 22	10,796 68
" " " "	1892	34,585 64	15,036 48	17,458 69	8,620 15
" " " "	1893	207 00	42,298 74	16,762 71	10,669 28
" " " "	1894	385 55	20,034 94	14,144 98	11,620 09
" " " "	1895		5,963 76	15,453 21	12,303 25
" " " "	1896	3,850 31		13,995 69	12,161 10
" " " "	1897	1,908 44	4,939 20	13,780 29	11,607 95
" " " "	1898	82,663 37	5,082 03	11,697 81	10,993 61
" " " "	1899	39,999 37		11,919 27	11,478 88
" " " "	1900	22,802 27	4,476 50	13,657 06	14,666 71
" " " "	1901	4,930 65	9,331 95	13,342 22	13,416 00
" " " "	1902		16,998 69	13,725 99	19,366 30
" " " "	1903		15,992 52	14,348 17	17,766 28
" " " "	1904		9,150 07	16,224 94	17,262 29
" " " "	1905		8,715 46	15,858 19	19,977 19
" " " "	1906		24,179 33	18,232 71	10,924 72
" " " "	1907		9,393 38	16,749 03	7,036 49
Total		†4,182,092 96	250,745 84	565,043 50	444,996 91

* Expenditure not given—records relating to same were kept in Ordnance Office at Montreal and were destroyed by fire in 1852.

† Included in total cost of Ottawa River Works, see page 19, cost of enlargement, $4,119,039.32.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

CULBUTE LOCK AND DAM.

——	Year ending	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation.	1868				
" " "	1869				
" " "	1870				
" " "	1871				
" " "	1872				
" " "	1873		835 53		
" " "	1874		38,388 99		
" " "	1875	63,659 29			
" " "	1876	76,842 44			
" " "	1877	56,081 87			
" " "	1878	5,933 53			
" " "	1879	20,694 19			
" " "	1880	16,688 20		202 50	259 31
" " "	1881	4,721 62		962 85	
" " "	1882	29,567 15		790 00	162 33
" " "	1883	14,249 60		695 00	288 99
" " "	1884	8,151 16		733 50	
" " "	1885	19,071 76		730 00	572 75
" " "	1886	26,385 27		730 00	2,396 14
" " "	1887	7,760 88		730 00	967 33
" " "	1888	7,573 99		739 50	730 60
" " "	1889	17,112 01		1,050 00	116 53
" " "	1890	2,818 35		747 83	
" " "	1891	2,183 15	9,122 05	745 25	499 91
" " "	1892		1,546 25	736 00	
" " "	1893		1,420 65	749 00	13 55
" " "	1894		2,540 14	730 00	494 43
" " "	1895		1,475 26	436 05	434 28
" " "	1896				
" " "	1897				
" " "	1898				100 00
" " "	1899				
" " "	1900	3,085 00			
" " "	1901	197 00			
" " "	1902		1,135 00		
" " "	1903				
" " "	1904		2,204 50		
" " "	1905		2,255 00		
" " "	1906				
" " "	1907				
Total		*382,776 46	60,923 37	11,507 48	7,036 15

* Included in total cost of Ottawa River Works, see page 19.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

RIDEAU CANAL.

	Year ending	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Imperial Government		3,911,701 47			
Government expenditure prior to Confederation		153,062 60			
" since "	1868	166 50	7,298 12	18,397 28	16,475 21
" " "	1869			19,250 71	13,140 77
" " "	1870		13 16	20,022 37	19,469 33
" " "	1871		11,732 98	22,814 58	18,120 52
" " "	1872		4,967 50	22,139 48	14,005 32
" " "	1873		18,070 97	22,841 51	26,074 49
" " "	1874		5,793 16	26,815 44	22,957 40
" " "	1875	9,310 85		26,553 37	19,699 81
" " "	1876	2,163 96		26,430 77	14,428 25
" " "	1877	214 11		25,959 56	14,198 18
" " "	1878			26,651 51	11,034 22
" " "	1879	7,703 88		26,042 52	7,134 55
" " "	1880			26,463 88	11,434 05
" " "	1881		133 50	26,024 71	8,627 00
" " "	1882			26,915 29	13,860 28
" " "	1883		70 65	27 322 81	23,524 84
" " "	1884		4,597 50	26,938 95	19,245 02
" " "	1885		2,098 76	26,971 32	18,189 55
" " "	1886		550 00	27,045 95	35,648 04
" " "	1887		20,823 96	29,440 46	18,565 34
" " "	1888		18,889 48	33,458 83	25,478 87
" " "	1889		6,665 22	33,801 77	18,106 36
" " "	1890		21,124 10	34,270 57	18,025 21
" " "	1891		20,967 25	34,641 98	21,537 56
" " "	1892		31,363 23	35,500 82	21,507 16
" " "	1893		24,274 71	35,022 49	18,789 50
" " "	1894		14,485 11	34,943 35	16,939 47
" " "	1895		31,559 48	33,827 08	19,897 32
" " "	1896		21,452 29	34,052 77	30,196 38
" " "	1897		19,079 11	31,461 55	29,535 94
" " "	1898		13,608 39	30,759 05	26,599 93
" " "	1899		700 29	30,751 20	28,199 49
" " "	1900		11,780 41	30,623 27	30,237 09
" " "	1901			31,334 40	33,791 17
" " "	1902		8,894 40	32,193 66	33,959 86
" " "	1903		16,235 13	34,595 31	36,424 23
" " "	1904		13,525 04	39,127 96	38,496 78
" " "	1905	1,565 84	14,513 35	40,838 81	49,790 55
" " "	1906		5,272 90	41,819 77	54,495 63
" " "	1907		14,322 03	30,667 34	44,627 82
Total		*4,085,889 21	384,862 18	1,184,734 45	942,468 49

* Ottawa River Works.

Ste. Anne's Lock, page 16		$ 1,170,215 63
Carillon and Grenville Canal, page 17		4,182,092 96
Culbute Canal, page 18		382,776 46
Rideau Canal, as above	$ 4,085,889 21	
Less expenditure by Imperial Government	3,911,701 47	
		174,187 74
Total Ottawa River Works (Capital)		$ 5,909,272 79
Add expenditure on slides and booms prior to Confederation	$ 719,247 13	
" " " since "	7,243 60	
" on Chats Canals prior to Confederation	482,950 81	
" in 1881, charged to Miscellaneous, see page 229, part ii, Public Accounts	1,136 84	
Add amount transferred, see page xxxvi, Public Accounts Balance Sheet, 1881	233,555 85	
		1,444,134 23
		$ 7,353,407 02
Less expenditure prior to Confederation, transferred to Income Account	$ 320,618 28	
Less expenditure in 1872, on Carillon and Grenville Canal, as shown in Public Accounts Balance Sheet, page xx, under Miscellaneous	165,257 28	
		485,875 56
Agreeing with Balance Sheet, Public Accounts, 1907, page 4		$ 6,867,531 46

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.
20—i—2½

W. C. LITTLE,
Accountant.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

ST. OURS LOCK.

——	Year ending	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	....	121,537 65	....	....	....
" since " "	1868	....	....	1,532 75	753 74
" " " "	1869	....	....	1,755 15	1,399 18
" " " "	1870	....	....	1,458 09	1,006 22
" " " "	1871	....	....	1,414 48	1,210 98
" " " "	1872	....	....	1,565 80	1,263 19
" " " "	1873	....	....	2,076 50	1,575 10
" " " "	1874	....	....	2,219 13	2,363 42
" " " "	1875	....	....	1,362 22	1,245 69
" " " "	1876	....	....	1,403 92	1,601 71
" " " "	1877	....	....	1,533 40	750 80
" " " "	1878	....	....	1,556 65	283 77
" " " "	1879	....	....	1,581 55	456 07
" " " "	1880	....	....	1,614 01	705 54
" " " "	1881	....	....	1,741 97	1,299 77
" " " "	1882	....	....	2,002 71	1,902 41
" " " "	1883	....	17,230 32	2,361 65	2,188 08
" " " "	1884	....	5,279 17	2,315 37	1,494 99
" " " "	1885	....	4,700 64	2,271 57	3,652 63
" " " "	1886	....	....	2,311 70	4,143 47
" " " "	1887	....	....	2,175 37	5,864 78
" " " "	1888	....	....	2,216 04	2,801 17
" " " "	1889	....	17,964 45	2,421 14	2,002 63
" " " "	1890	....	24,571 96	2,138 40	1,935 44
" " " "	1891	....	21,696 74	2,011 08	4,460 16
" " " "	1892	....	3,585 34	2,168 44	1,944 33
" " " "	1893	....	....	2,136 66	1,994 34
" " " "	1894	....	....	2,216 68	924 55
" " " "	1895	....	....	2,161 63	915 50
" " " "	1896	....	....	2,094 91	1,678 49
" " " "	1897	....	....	2,135 60	707 06
" " " "	1898	....	....	2,049 67	692 04
" " " "	1899	....	....	2,244 12	1,494 93
" " " "	1900	....	1,596 88	2,181 43	2,681 10
" " " "	1901	....	3,610 06	2,128 25	1,681 44
" " " "	1902	....	15,549 27	2,262 39	984 36
" " " "	1903	....	9,344 89	2,288 63	1,671 83
" " " "	1904	....	7,984 41	2,334 67	1,690 61
" " " "	1905	....	14,900 90	2,479 66	1,716 35
" " " "	1906	....	7,307 39	2,582 95	3,872 75
" " " "	1907	....	4,200 00	2,064 62	1,142 79
Total ...	....	*121,537 65	159,522 42	80,570 96	72,153 41

* Included in the total cost of Chambly Canal and Richelieu River, *see* page 21.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

CHAMBLY CANAL.

——	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	.....	634,711 76	.....	.....	.....
" since " ..	1868	.....	.....	8,312 90	9,355 70
" " " ..	1869	.....	.....	8,437 22	13,120 97
" " " ..	1870	.....	.....	8,934 41	20,180 73
" " " ..	1871	.....	2,839 85	10,214 71	22,426 33
" " " ..	1872	.....	1,906 40	9,628 50	22,327 99
" " " ..	1873	.....	759 00	10,390 44	11,789 27
" " " ..	1874	.....	2,810 00	11,675 67	16,427 19
" " " .	1875	2,415 00	.....	12,201 99	16,306 91
" " " ..	1876	.....	.....	10,593 14	13,273 56
" " " ..	1877	80 00	.....	10,281 78	10,111 32
" " " ..	1878	.....	.....	10,413 99	6,022 96
" " " ..	1879	.....	.....	11,301 53	8,809 77
" " " .	1880	.....	.....	11,516 22	12,377 74
" " " ..	1881	.....	.....	13,950 47	20,705 17
" " " ..	1882	.....	31,796 41	16,686 78	16,843 60
" " " ..	1883	.....	21,332 36	15,904 38	15,182 24
" " " ..	1884	.....	41,640 77	18,448 85	12,003 34
" " " ..	1885	.....	21,049 23	18,378 55	13,046 95
" " " ..	1886	.....	14,547 27	19,501 28	11,999 77
" " " ..	1887	.....	17,911 17	19,053 62	20,071 37
" " " ..	1888	.....	65,536 64	20,073 60	11,823 74
" " " ..	1889	.....	51,137 87	19,679 22	19,392 18
" " ..	1890	.....	23,221 48	19,655 38	14,399 93
" " " ..	1891	.....	43,344 41	19,204 76	11,399 93
" " " ..	1892	.....	38,353 99	19,665 22	12,976 48
" " " .	1893	.....	21,127 65	19,310 29	12,451 03
" " " .	1894	.....	8,567 78	19,040 93	11,920 74
" " " ..	1895	.....	6,147 63	19,325 49	11,779 12
" " " ..	1896	.....	3,694 63	19,349 65	11,801 12
" " " ..	1897	.....	12,665 88	18,754 17	13,128 55
" " " .	1898	.....	13,184 68	17,992 90	12,466 51
" " " ..	1899	.....	15,255 42	18,336 50	11,997 51
" " " ..	1900	.....	5,448 88	18,397 58	13,995 00
" " " ..	1901	.....	1,195 09	18,529 48	17,572 35
" " " ..	1902	.....	19,132 80	18,832 25	17,313 02
" " " .	1903	.....	8,977 43	19,286 10	21,745 65
" " " ..	1904	.....	26,701 59	21,544 69	25,656 00
" " " ..	1905	.....	33,066 50	26,970 79	19,896 57
" " " ..	1906	.....	26,192 72	26,039 53	25,173 48
" " " ..	1907	.....	29,953 80	19,916 33	22,508 88
		637,206 76			
Less proceeds of sale of piece of land.....	.....	150 00			
Total	.....	*637,056 76	609,799 33	655,731 29	611,780 67

* Chambly Canal and River Richelieu.

Chambly Canal, as above..		$ 637,056 76
St. Ours Lock, see page 20.		121,537 65
Less amount deducted at Confederation, *see* Public Accounts, 1868, part i, page 9.		$ 758,594 41
Government expenditure prior to Confederation, Chambly Canal, as above	$ 634,711 76	
St. Ours Lock, see page 20	121,537 65	
	$ 756,249 41	
Returned as an asset in Public Accounts, 1868..	433,807 83	
		322,441 58
Agreeing with Public Accounts, 1907, page 4.		$ 436,152 83

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—***Continued.***

MURRAY CANAL.

——	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation					
" since " "	1868		400 00		
" " " "	1869				
" " " "	1870				
" " " "	1871				
" " " "	1872				
" " " "	1873				
" " " "	1874				
" " " "	1875				
" " " "	1876				
" " " "	1877				
" " " "	1878				
" " " "	1879				
" " " "	1880				
" " " "	1881				
" " " "	1882	7,135 63			
" " " "	1883	84,071 68			
" " " "	1884	118,187 43			
" " " "	1885	148,902 66			
" " " "	1886	179,704 52			
" " " "	1887	142,563 66			
" " " "	1888	146,754 37			
" " " "	1889	215 326 46			
" " " "	1890	106,760 35		494 31	
" " " "	1891	61,260 49		5,137 03	173 53
" " " "	1892	5,964 22		5,803 48	3,505 15
" " " "	1893	30,838 79		5,499 62	5,341 34
" " " "	1894			5,667 52	5,295 57
" " " "	1895			5,354 97	5,063 49
" " " "	1896			5,409 10	5,410 33
" " " "	1897			5,526 87	3,966 41
" " " "	1898			5,799 94	4,710 23
" " " "	1899			5,073 70	3,533 68
" " " "	1900			5,613 83	2,777 60
" " " "	1901			5,175 74	1,138 15
" " " "	1902			5,254 51	6,377 19
" " " "	1903	500 60		5,757 00	4,627 70
" " " "	1904	750 00	2,521 13	5,291 43	6,075 94
" " " "	1905	100 00	740 45	5,346 62	4,452 68
" " " "	1906		293 75	5,183 61	2,840 91
" " " "	1907		10,423 00	2,788 14	1,710 55
Total		*1,248,820 26	14,378 33	90,177 42	67,000 45

* Agreeing with Public Accounts Balance Sheet, 1907, page 4.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

TRENT CANAL.

——	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	.....	309,371 31	.....	.....	.....
" since "	1868	.....	.....	.....	.....
" " "	1869	.....	.....	.....	.....
" " "	1870	.....	.....	.....	.....
" " "	1871	.....	.....	.....	.....
" " "	1872	.....	.....	.....	.....
" " "	1873	.....	.....	.....	.....
" " "	1874	.....	.....	.....	.....
" " "	1875	.....	.....	.....	.....
" " "	1876	.....	.....	.....	.....
" " "	1877	.....	.....	.....	.....
" " "	1878	.....	.....	.....	.....
" " "	1879	.....	.....	.....	.....
" " "	1880	561 50	.....	1,188 92	3,568 89
" " "	1881	.....	.....	2,489 93	2,233 50
" " "	1882	.....	5,836 51	2,011 92	8,115 50
" " "	1883	40,767 16	9,303 66	2,235 50	3,047 42
" " "	1884	120,393 91	6,198 57	2,208 64	5,264 35
" " "	1885	121,382 84	.....	3,303 87	4,653 50
" " "	1886	75,103 30	.....	1,639 75	5,917 88
" " "	1887	179,541 63	.....	1,938 08	6,008 88
" " "	1888	114,879 35	.....	1,770 29	5,151 42
" " "	1889	47,592 13	29,677 92	3,242 05	5,935 94
" " "	1890	58,644 50	11,522 65	3,450 99	730 55
" " "	1891	9,826 49	3,164 81	3,803 66	4,888 98
" " "	1892	4,457 28	6,506 97	3,695 85	4,721 85
" " "	1893	5,962 47	10,838 90	3,739 86	2,087 17
" " "	1894	3,412 32	20,403 93	3,785 47	4,988 59
" " "	1895	53,907 70	21,143 41	4,184 18	3,374 49
" " "	1896	392,976 08	6,185 75	4,349 34	3,329 97
" " "	1897	486,575 70	13,880 37	4,965 39	3,497 90
" " "	1898	351,273 31	8,991 54	5,034 60	4,998 80
" " "	1899	166,611 49	6,179 79	5,048 72	6,454 49
" " "	1900	334,583 01	8,043 39	5,131 52	9,989 26
" " "	1901	284,503 89	10,494 82	5,254 51	13,075 89
" " "	1902	449,075 45	26,165 93	5,575 52	14,984 88
" " "	1903	523,950 74	18,548 58	6,993 25	10,791 15
" " "	1904	489,038 44	21,228 55	7,237 05	21,179 12
" " "	1905	333,261 75	36,853 28	12,071 88	26,056 78
" " "	1906	319,789 49	26,030 36	17,440 68	33,398 85
" " "	1907	153,045 42	35,360 10	19,229 25	36,516 47
Total	.....	*5,430,488 66	342,559 79	143,020 67	254,962 47

* Total expenditure on Capital Account as above..... .... $5,430,488 66

LESS—Expenditure prior to Confederation.....$ 309,371 31

" Year 1880. .... 561 50

309,932 81

Agreeing with Public Account Balance Sheet, 1907, page 4.. .....$5,120 555 85

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c. —*Continued.*

TAY CANAL.

——	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation	1868				
" " "	1869				
" " "	1870				
" " "	1871				
" " "	1872				
" " "	1873				
" " "	1874				
" " "	1875				
" " "	1876				
" " "	1877				
" " "	1878				
" " "	1879				
" " "	1880				
" " "	1881				
" " "	1882		748 65		
" " "	1883	4,831 80			
" " "	1884	50,878 12			
" " "	1885	92,473 97			
" " "	1886	65,561 51			
" " "	1887	49,617 92			
" " "	1888	54,166 57			
" " "	1889	89,486 18			
" " "	1890	22,226 23		*	*
" " "	1891	17,114 78		*	*
" " "	1892	29,771 65		*	*
" " "	1893			*	*
4 " "	1894			*	*
" " "	1895			*	*
" " "	1896			*	*
" " "	1897	10,720 50		*	*
" " "	1898			*	*
" " "	1899			*	*
" " "	1900	2,750 00		*	*
" " "	1901			*	*
" " "	1902			*	*
" " "	1903			*	*
" " "	1904			*	*
" " "	1905			*	*
" " "	1906			*	*
" " "	1907			*	*
Total		†489,599 23	748 65	*	*

* Included in Rideau Canal.
† Agreeing with Public Accounts, 1907, page 4.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

SAULT STE. MARIE CANAL.

——	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure since Confederation.	1868				
" " "	1869				
" " "	1870				
" " "	1871				
" " "	1872		949 35		
" " "	1873				
" " "	1874				
" " "	1875				
" " "	1876				
" " "	1877				
" " "	1878				
" " "	1879				
" " "	1880				
" " "	1881				
" " "	1882				
" " "	1883				
" " "	1884				
" " "	1885				
" " "	1886				
" " "	1887				
" " "	1888	8,145 06			
" " "	1889	34,018 95			
" " "	1890	176,568 55			
" " "	1891	325,336 33			
" " "	1892	341,474 31			
" " "	1893	589,801 25			
" " "	1894	1,316,529 29			
" " "	1895	466,151 50		3,432 73	
" " "	1896	189,986 59		16,074 70	2,650 17
" " "	1897	209,561 82		15,381 59	7,671 79
" " "	1898	21,004 56		14,389 92	8,172 09
" " "	1899	63,935 48		13,840 24	6,564 40
" " "	1900	27,157 98		13,901 40	13,219 87
" " "	1901	323,353 93	48 39	13,730 93	10,289 18
" " "	1902	122,505 73		15,920 80	14,839 71
" " "	1903	65,933 43		16,077 22	10,855 70
" " "	1904	32,029 54		14,653 35	9,491 44
" " "	1905	110,181 69		15,681 55	14,776 33
" " "	1906	120,000 00		15,878 11	20,086 15
" " "	1907	95,504 63		12,290 94	11,520 53
Total		*4 639,180 62	997 74	181,253 48	130,137 36

*Agreeing with Public Accounts, 1907, page 4.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

SOULANGES CANAL.

——	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation	...	.....	.....	.....	.....
" since "	1868	.....	.....	.....	.....
" " "	1869	.....	.....	.....	.....
" " "	1870	.....	.....	.....	.....
" " "	1871	.....	.....	.....	.....
" " "	1872	.....	.....	.....	.....
" " "	1873	.....	.....	.....	.....
" " "	1874	.....	.....	.....	.....
" " "	1875	.....	.....	.....	.....
" " "	1876	.....	.....	.....	.....
" " "	1877	.....	.....	.....	.....
" " "	1878	.....	.....	.....	.....
" " "	1879	.....	.....	.....	.....
" " "	1880	.....	.....	.....	.....
" " "	1881	.....	.....	.....	.....
" " "	1882	.....	.....	.....	.....
" " "	1883	.....	.....	.....	.....
" " "	1884	.....	.....	.....	.....
" " "	1885	.....	.....	.....	.....
" " "	1886	.....	.....	.....	.....
" " "	1887	.....	.....	.....	.....
" " "	1888	.....	.....	.....	.....
" " "	1889	.....	.....	.....	.....
" " "	1890	.....	.....	.....	.....
" " "	1891	.....	.....	.....	.....
" " "	1892	54,235 76	.....	.....	.....
" " "	1893	210,336 24	.....	.....	.....
" " "	1894	723,380 95	.....	.....	.....
" " "	1895	752,016 53	.....	.....	.....
" " "	1896	535,939 07	.....	.....	.....
" " "	1897	363,126 06	.....	.....	.....
" " "	1898	1,016,401 00	.....	.....	.....
" " "	1899	1,442,824 22	.....	.....	.....
" " "	1900	693,806 24	.....	6,711 84	5,000 00
" " "	1901	462,626 36	115 00	25,154 78	5,888 77
" " "	1902	235,021 79	.....	22,672 50	2,267 13
" " "	1903	248,929 10	.....	31,987 06	10,362 23
" " "	1904	113,328 45	15,608 69	25,235 25	39,382 01
" " "	1905	34,202 71	30,406 25	25,432 49	21,174 84
" " "	1906	5,000 22	16,033 79	24,817 37	17,096 33
" " "	1907	13,508 88	3,216 29	19,964 04	15,604 71
Total.....	.....	*6,904,683 58	65,380 02	181,975 33	116,776 02

*Included in total cost of St. Lawrence River and Canals, *see* part i, page 9.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENT showing amount expended on Construction and Enlargement of Canals, to March 31, 1907.

Canal.	Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
St. Peter's	648,547 14		648,547 14
Lachine	2,589,532 85	9,008,217 93	11,597,750 78
Beauharnois	1,636,690 26		1,636,690 26
St. Lawrence River and Canals	18,442 85	3,293,397 95	3,311,840 80
Lake St. Louis		298,176 11	298,176 11
Lake St. Francis		75,906 71	75,906 71
Cornwall	1,945,624 73	5,278,659 97	7,224,284 70
Williamsburg—Farran's Point		877,090 57	10,373,311 29
Williamsburg—Galops		6,006,626 92	
Williamsburg—Rapide Plat		2,158,242 00	
Williamsburg—Williamsburg	1,320,655 54	10,696 26	
Welland	7,693,824 03	19,582,045 37	27,275,869 40
Ste. Anne's	134,456 51	1,035,759 12	1,170,215 63
*Carillon and Grenville	63,053 64	4,119,039 32	4,182,092 96
Culbute	382,776 46		382,776 46
Rideau	4,085,889 21		4,085,889 21
St. Ours	121,537 65		121,537 65
Chambly	637,056 76		637,056 76
Murray	1,248,820 26		1,248,820 26
Trent	5,430,488 66		5,430,488 66
Tay	489,599 23		489,599 23
Sault Ste. Marie	4,639,180 62		4,639,180 62
Soulanges	6,904,683 58		6,904,683 58
Total	39,990,859 98	51,743,858 23	91,734,718 21

*Construction by Imperial Government not included, records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

*RECAPITULATION—EXPENDITURE on Canals, also showing Revenue received.

——	Year ending.	Capital.	Income.	Staff.	Repairs.	Revenue received.
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation, including Imperial Government		20,593,866 13	98,378 46			
Government expenditure since Confederation	1868	33,784 06	95,347 79	113,084 50	101,646 44	403,879 19
" "	1869	126,898 20	55 00	116,069 76	118,579 31	400,263 32
" "	1870		90,355 96	120,403 02	150,176 70	414,687 02
" "	1871		116,429 54	135,040 81	140,467 52	488,538 76
" "	1872	255,645 75	33,289 27	124,137 09	152,086 25	466,847 52
" "	1873	256,547 27	127,369 55	148,581 18	186,573 13	486,433 26
" "	1874	1,189,591 91	51,037 05	167,194 40	213,613 86	510,755 99
" "	1875	1,714,830 37	479 00	168,401 21	203,226 85	414,979 59
" "	1876	2,388,733 46	810 75	178,411 80	190,578 45	390,337 04
" "	1877	4,131,374 30	22 30	179,661 40	138,448 51	390,857 37
" "	1878	3,843,338 62		187,521 31	122,251 60	373,814 17
" "	1879	3,064,098 61		191,892 44	115,349 99	337,675 13
" "	1880	2,123,366 34		195,039 33	147,167 52	341,598 14
" "	1881	2,075,891 65	7,246 69	197,573 62	154,653 63	361,558 17
" "	1882	1,593,174 09	55,025 03	224,572 61	187,399 02	325,231 54
" "	1883	1,763,001 97	62,503 14	269,415 01	178,617 86	361,604 01
" "	1884	1,577,295 42	60,993 99	280,657 29	192,219 38	372,561 69
" "	1885	1,504,621 47	58,297 59	280,226 20	201,708 47	321,289 47
" "	1886	1,333,324 80	31,984 02	282,323 63	198,251 97	328,977 43
" "	1887	1,783,698 16	65,983 06	285,172 62	198,888 84	321,784 88
" "	1888	1,033,118 34	120,561 59	292,458 76	201,928 93	317,902 04
" "	1889	972,918 43	162,015 49	301,040 23	240,261 36	333,188 90
" "	1890	1,026,364 24	146,853 54	290,516 63	176,089 00	354,816 92
" "	1891	1,318,092 15	165,843 87	294,562 12	204,768 45	349,431 90
" "	1892	1,437,149 30	194,129 61	293,115 58	231,089 54	324,475 24
" "	1893	2,069,573 30	196,185 84	291,588 97	204,759 39	357,089 87
" "	1894	3,027,164 19	109,216 33	294,446 34	179,630 13	387,788 97
" "	1895	2,452,273 65	216,057 58	281,477 04	164,033 71	339,890 49
" "	1896	2,258,778 97	85,820 49	292,121 05	209,321 60	339,538 72
" "	1897	2,348,636 91	101,205 74	287,970 36	178,385 47	384,780 53
" "	1898	3,207,249 79	82,400 55	280,872 44	203,478 86	407,652 81
" "	1899	3,899,877 31	82,205 60	280,628 57	202,312 36	369,044 38
" "	1900	2,639,564 93	120,653 93	292,609 24	227,626 97	322,642 86
" "	1901	2,369,569 89	135,500 57	314,095 04	262,876 07	315,425 69
" "	1902	2,114,689 88	213,044 91	317,838 61	263,768 27	300,413 68
" "	1903	1,823,273 61	275,103 58	390,281 82	294,113 92	230,213 15
" "	1904	1,880,787 20	298,678 23	381,016 82	350,278 54	79,536 51
" "	1905	2,071,593 72	352,855 43	431,499 60	401,742 79	78,009 21
" "	1906	1 552,121 21	310,716 70	447,962 92	375,889 60	108,067 76
" "	1907	887,838 61	254,423 18	329,629 63	287,231 03	105,003 15
Total		91,734,718 21	4,579,080 95	10,231,111 00	8,151,491 29	13,618,586 47

*This does not include expenditure which has been charged to Canals—General—but amounts expended on specified canals.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

HYDRAULIC AND OTHER RENTS.

Balances due July 1, 1906.	Accrued during the nine months ended March 31, 1907.	Totals.	1906–1907.	Abatement.	Deposited to the credit of the Receiver General.	Balances due March 31, 1907.	Totals.
$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.
61,793 44	33,568 06	95,361 50	Welland canal		32,174 06	63,178 44	95,361 50
3,303 67	2,399 00	5,702 67	Williamsburg canal		728 00	4,974 67	5,702 67
7,914 37	7,518 50	15,432 87	Cornwall canal	240 00	7,482 50	7,710 37	15,432 87
11,265 84	2,421 00	13,686 84	Beauharnois canal		517 00	13,169 84	13,686 84
34,898 15	45,410 62	80,308 77	Lachine canal	160 00	45,700 61	34,448 16	80,308 77
574 84	111 00	685 84	Chambly canal		55 00	630 84	685 84
2,736 08	2,221 05	4,957 13	Rideau canal	305 11	1,651 30	3,000 72	4,957 13
1,337 45	2,073 04	3,410 49	Trent Valley canal	200 00	2,002 54	1,207 95	3,410 49
30 00	230 00	260 00	Sault Ste. Marie canal		215 00	45 00	260 00
25,541 83	456 00	25,997 83	Carillon and Grenville canal		235 50	25,762 33	25,997 83
5 00	37 00	42 00	Sundry canals		33 00	9 00	42 00
	1,573 00	1,573 00	Soulanges canal		1,516 00	57 00	1,573 00
149,400 67	98,018 27	247,418 94	Totals	905 11	92,310 51	154,203 32	247,418 94

W. C. LITTLE,
Accountant.

Department of Railways and Canals,
Ottawa, July 5, 1907.

REVENUE STATEMENT ENDING MARCH 31, 1907.

Canal Revenue.								Deposits to the Credit of the Receiver General.			
Tolls.	Wharfage and Storage and Fines.	Fines.	Other Receipts.	Total Canal Revenue Accrued.	Hydraulic and other rents, &c.	Total.	Collection Divisions.	On Account Canal Revenue.	On Account Hydraulic Rents.	Total.	Cost of Staff, Repairs and Statistical Offices chargeable to Revenue.
$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		$ cts.	$ cts.	$ cts.	$ cts.
							Welland Canal				133,848 24
	33 38			33 38	1,394 40	1,427 78	Port Colborne	33 38	1,394 40	1,427 78	2,096 23
	228 10			228 10	30,779 66	31,007 76	Port Dalhousie	228 10	30,779 66	31,007 76	1,693 20
	261 48			261 48	32,174 06	32,435 54	Totals	261 48	32,174 06	32,435 54	137,637 67
							St. Lawrence Canals				263,528 39
					517 00	517 00	Beauharnois		517 00	517 00	
	60 00			60 00	7,482 50	7,542 50	Cornwall	60 00	7,482 50	7,542 50	1,363 20
					728 00	728 00	Cardinal		728 00	728 00	686 25
	5 00			5 00	1,516 00	1,521 00	Coteau Landing	5 00	1,516 00	1,521 00	1,119 91
	12,741 37			12,741 37	45,701 61	58,442 98	Montreal	12,741 37	45,701 61	58,442 98	5,200 63
	1,162 15			1,162 15		1,162 15	Lachine	1,162 15		1,162 15	1,777 90
							Kingston				507 10
	13,968 52			13,968 52	55,945 11	69,913 63	Totals	13,968 52	55,945 11	69,913 63	274,183 38
							Chambly Canal				46,450 42
					1 00	1 00	Chambly		1 00	1 00	706 83
					54 00	54 00	St. John's		54 00	54 00	1,184 15
							St. Ours				516 00
					55 00	55 00	Totals		55 00	55 00	48,857 40
							Ottawa Canals				27,434 52
	5 00			5 00	232 50	237 50	Grenville	5 00	232 50	237 50	371 05
	5 00			5 00	3 00	8 00	Carillon	5 00	3 00	8 00	541 40
							St. Anne's Lock				635 03
	10 00			10 00	235 50	245 50	Totals	10 00	235 50	245 50	28,982 00

							Rideau Canal.				75,604 16
	79 20			79 20	1,326 10	1,405 30	Ottawa	79 20	1,326 10	1,405 30	1,173 60
					282 50	282 50	Kingston Mills		282 50	282 50	347 49
	15 00			15 00	42 70	57 70	Smith's Falls	15 00	42 70	57 70	309 00
	94 20			94 20	1,651 30	1,745 50	Totals	94 20	1,651 30	1,745 50	77,434 25
							St. Peter's Canal.				2,715 65
					32 00	32 00			32 00	32 00	150 00
							Totals		32 00	32 00	2,865 65
							Murray Canal.				4,887 49
							Trent Valley Canal.				55,745 72
							Fenelon Falls				25 00
					2,002 54	2,002 54	Peterborough		2,002 54	2,002 54	22 67
					2,002 54	2,002 54	Totals		2,002 54	2,002 54	55,793 39
					215 00	215 00	*Sault Ste. Marie Canal.*		215 00	215 00	25,141 07
	14,334 20			14,334 20	92,310 51	106,644 71	Totals	14,334 20	92,310 51	106,644 71	655,782 30
							Dredge Vessels				11,939 32
							Inspection				
							Department of Public Printing and Stationery				758 51
							General				14,631 80
							Grand Totals	14,334 20	92,310 51	106,644 71	683,111 93
							Less—Refunds			1,641 56	
							Net Revenue			105,003 15	

W. C. LITTLE,
Accountant.

Department of Railways and Canals,
Ottawa, July 5, 1907.

INTERCOLONIAL RAILWAY.

(Including amounts paid to Nova Scotia Railway and European and North American Railway, N.B.)

—	Year.	Construction.	Income.	Working Expenses including Windsor Branch Ry.	Revenue received, including Windsor Branch Ry.
		$ cts.	$ cts.	$ cts.	$ cts.
Expenditure prior to Confederation		10,766,725 54			
" since " "	1868	483,353 65		359,961 08	420,752 58
" " " "	1869	282,615 18		387,548 47	455,022 76
" " " "	1870	1,729,381 49		445,208 75	471,245 09
" " " "	1871	2,916,782 13		442,993 81	565,713 52
" " " "	1872	5,131,141 51		595,076 22	622,900 56
" " " "	1873	5,201,450 37		1,011,892 60	703,458 26
" " " "	1874	3,614,898 81		1,847,175 24	893,430 17
" " " "	1875	3,426,099 55		1,532,589 62	861,593 43
" " " "	1876	1,108,321 59		1,277,197 79	848,861 46
" " " "	1877	1,318,352 19		1,661,673 55	1,154,445 35
" " " "	1878	408,816 74		1,811,273 56	1,378,946 78
" " " "	1879	226,639 19		2,010,183 22	1,294,099 69
" " " "	1880	2,048,014 60		1,607,956 70	1,520,310 45
" " " "	1881	608,732 80		1,780,353 53	1,777,856 76
" " " "	1882	585,568 79		2,080,592 37	2,100,315 85
" " " "	1883	1,616,632 96		2,383,477 20	2,395,034 99
" " " "	1884	1,405,377 52		2,366,719 95	2,376,666 19
" " " "	1885	1,195,363 08		2,460,229 87	2,392,605 00
" " " "	1886	544,958 17		2,568,473 10	2,406,858 88
" " " "	1887	823,070 86		2,854,158 91	2,621,337 41
" " " "	1888	742,203 09		3,300,481 94	2,937,337 40
" " " "	1889	675,228 13		3,174,785 19	2,923,736 46
" " " "	1890	365,246 48		3,500,455 80	2,958,243 38
" " " "	1891	79,929 34		3,691,273 65	3,007,630 51
" " " "	1892	168,101 77		3,458,891 39	2,978,950 82
" " " "	1893	228,984 79		3,062,207 45	3,099,815 20
" " " "	1894	166,362 43		2,999,317 07	3,020,485 74
" " " "	1895	327,034 51		2,964,940 98	2,979,795 59
" " " "	1896	259,105 23		3,029,304 08	2,994,201 93
" " " "	1897	145,142 00		2,936,789 71	2,906,631 25
" " " "	1898	252,367 20	70,000 00	3,275,830 14	3,154,896 49
" " " "	1899	1,081,929 94	210,000 00	3,478,559 30	3,775,558 08
" " " "	1900	1,796,348 29		4,444,296 25	4,599,423 14
" " " "	1901	3,633,836 57		5,477,285 30	5,019,497 76
" " " "	1902	4,621,841 05		5,596,939 57	5,720,990 50
" " " "	1903	2,254,266 68		6,214,496 38	6,366,884 53
" " " "	1904	†1,880,856 60		7,264,263 13	6,392,865 48
" " " "	1905	3,937,621 93		8,535,689 91	6,833,561 50
" " " "	1906	‡3,765,170 99		7,599,400 33	7,693.282 40
" " " "	1907	1,506,209 26		6,045,597 15	6,248,311 00
Total		*73,310,082 91	280,000 00	121,469,589 76	112,873,554 34

* Including $296,672.90 charged to 'Consolidated Fund.'

† Expenditure for year $1,894,856 90
Less refunds of previous years 14.000 30

$1,880,856 60

‡ Expenditure for year $3,769,942 95
Add refunded cheque of 1901-2 paid during fiscal year 1905-6 ..... 4,227 95

$3,765,170 99

INTERCOLONIAL RAILWAY—*Concluded.*

Total cost of construction as shown on page 32			$73,310,082 91
Less amounts transferred from Capital to Consolidated Fund as follows:—			
	Nova Scotia Ry.	European and North American Ry.	
1868	$ 16,800 99	$ 11,302 89	
1870	34,403 45	1,749 21	
1871	50,405 69	...	
1873	106,899 59	75,311 08	
	$ 208,509 72	$ 88,363 18	
		208,509 72	
			296,872 90
			$73,013,210 01
Cape Breton Railway, page 37			3,860,679 14
Oxford and New Glasgow Railway, page 36			1,949,063 21
Eastern Extension Railway, page 34			1,324,042 81
Montreal and European Short Line Railway, page 38			333,942 72
Drummond County Railway, page 42			1,464,000 00
Canada Eastern Railway, page 45			800,000 00
Total capital cost of Intercolonial Railway system			*$82,744,937 89

* Agreeing with Public Accounts, 1906-7, page 4.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907,

EASTERN EXTENSION RAILWAY.

	Year.	Capital.	Working Expenses.	Revenue Received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation				
" since " "	1868			
" " " "	1869			
" " " "	1870			
" " " "	1871			
" " " "	1872			
" " " "	1873			
" " " "	1874			
" " " "	1875			
" " " "	1876			
" " " "	1877			
" " " "	1878			
" " " "	1879			
" " " "	1880			
" " " "	1881			
" " " "	1882			
" " " "	1883			
" " " "	1884	1,284,311 97	10,033 77	30,767 66
" " " "	1885	2,055 92	78,273 65	73,050 01
" " " "	1886	183 79	94,756 06	66,893 11
" " " "	1887		94,254 04	64,107 16
" " " "	1888		90,954 73	70,552 20
" " " "	1889	34,235 73	90,719 04	72,436 65
" " " "	1890		79,102 77	84,658 95
" " " "	1891	3,255 40	*	†
" " " "	1892		*	†
" " " "	1893		*	†
" " " "	1894		*	†
" " " "	1895		*	†
" " " "	1896		*	†
" " " "	1897		*	†
" " " "	1898		*	†
" " " "	1899		*	†
" " " "	1900		*	†
" " " "	1901		*	†
" " " "	1902		*	†
" " " "	1903		*	†
" " " "	1904		*	†
" " " "	1905		*	†
" " " "	1906		"	†
" " " "	1907		*	†
Total		‡ 1,324,042 81	538,094 06	462,465 68

* Included in Intercolonial Railway expenses. † Included in Intercolonial Railway revenue.
‡ Included in total cost of Intercolonial Railway system, page 33.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

CARLETON BRANCH RAILWAY.

——	Year.	Capital.	Working Expenses.	Revenue Received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation				
" since " "	1868			
" " " "	1869			
" " " "	1870			
" " " "	1871			
" " " "	1872			
" " " "	1873			
" " " "	1874			
" " " "	1875			
" " " "	1876			
" " " "	1877			
" " " "	1878			
" " " "	1879			
" " " "	1880			
" " " "	1881			
" " " "	1882			
" " " "	1883			
" " " "	1884			
" " " "	1885			
" " " "	1886	85,610 69		
" " " "	1887	2,299 62		
" " " "	1888	500 17		
" " " "	1889			
" " " "	1890			
" " " "	1891			
" " " "	1892			
" " " "	1893			
" " " "	1894			
" " " "	1895			
" " " "	1896			
" " " "	1897			
" " " "	1898			
" " " "	1899			
" " " "	1900			
" " " "	1901			
" " " "	1902			
" " " "	1903			
" " " "	1904			
" " " "	1905			
" " " "	1906			
" " " "	1907			
Total		*88,410 48		

* Victoria, chap. 6, transferred the Carleton Branch Railway to the city of St. John, N.B., for the sum $40,000, which sum was paid in March, 1893, to the Receiver General.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

OXFORD AND NEW GLASGOW.

—	Year.	Capital.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" since "	1868		
" " "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
" " "	1875		
" " "	1876		
" " "	1877		
" " "	1878		
" " "	1879		
" " "	1880		
" " "	1881		
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885		
" " "	1886		
" " "	1887		
" " "	1888	280,932 35	
" " "	1889	840,553 57	
" " "	1890	434,074 60	
" " "	1891	220,886 39	
" " "	1892	48,745 23	
" " "	1893	7,922 80	
" " "	1894	112,382 75	
" " "	1895	*	
" " "	1896	*	
" " "	1897	3,565 52	
" " "	1898		
" " "	1899		
" " "	1900		
" " "	1901		
" " "	1902		
" " "	1903		
" " "	1904		
" " "	1905		
" " "	1906		
" " "	1907		
Total ...		‡ 1,949,063 21	†

* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses.
‡ Included in total cost of Intercolonial Railway system, page 33.

W. C. LITTLE,,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

CAPE BRETON RAILWAY.

——	Year.	Capital.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation	....	.....	.....
" since "	1868	.....	.....
" " "	1869	.....	.....
" " "	1870	.....	.....
" " "	1871	.....	.....
" " "	1872	.....	.....
" " "	1873	.....	.....
" " "	1874	.....	.....
" " "	1875	.....	.....
" " "	1876	.....	.....
" " "	1877	.....	.....
" " "	1878	.....	.....
" " "	1879	.....	.....
" " "	1880	.....	.....
" " "	1881	.....	.....
" " "	1882	.....	.....
" " "	1883	.....	.....
" " "	1884	.....	.....
" " "	1885	.....	.....
" " "	1886	.....	.....
" " "	1887	76,501 89	.....
" " "	1888	689,450 50	.....
" " "	1889	1,083,276 60	.....
" " "	1890	1,170,523 62	.....
" " "	1891	521,441 62	.....
" " "	1892	99,936 96	.....
" " "	1893	59,982 74	.....
" " "	1894	158,770 61	.....
" " "	1895	*	.....
" " "	1896	*	.....
" " "	1897	405 00	.....
" " "	1898	389 60	.....
" " "	1899	.....	.....
" " "	1900	.....	.....
" " "	1901	.....	.....
" " "	1902	.....	.....
" " "	1903	.....	.....
" " "	1904	.....	.....
" " "	1905	.....	.....
" " "	1906	.....	.....
" " "	1907	.....	.....
Total	.....	§3,860,679 14	†

* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses.
§ Included in total cost of Intercolonial Railway system, see page 33.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

MONTREAL AND EUROPEAN SHORT LINE RAILWAY.

	Year.	Construction.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation			
" since "	1868		
" " "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
" " "	1875		
" " "	1876		
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" " "	1881		
" " "	1882		
" " "	1883		
" " "	1884		
" " "	1885	49,587 45	
" " "	1886	135,214 38	
" " "	1887	24,157 32	
" " "	1888	397 35	
" " "	1889		
" " "	1890		
" " "	1891	124,568 23	
" " "	1892		
" " "	1893		
" " "	1894	17 99	
" " "	1895		
" " "	1896		
" " "	1897		
" " "	1898		
" " "	1899		
" " "	1900		
" " "	1901		
" " "	1902		
" " "	1903		
" " "	1904		
" " "	1905		
" " "	1906		
	1907		
Total		*333,942 72	

* Included in total cost of Intercolonial Railway system, page 33.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

——	Year.	Construction.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		3,114,735 11		
" since "	1874		750 00	
" " "	1875	46,086 63	49,344 62	24,493 99
" " "	1876	42,546 10	219,930 43	118,060 96
" " "	1877	200,000 00	228,595 25	130,664 92
" " "	1878	6,551 86	221,599 49	135,899 60
" " "	1879	40,129 05	223,313 12	125,855 91
" " "	1880	16,539 82	164,640 55	113,851 11
" " "	1881		203,122 88	131,131 43
" " "	1882	402 03	228,259 97	137,267 54
" " "	1883	57,186 02	252,808 41	146,170 42
" " "	1884	130,663 38	236,428 13	144,504 12
" " "	1885	76,956 56	211,207 01	158,588 06
" " "	1886	4,668 33	216,744 34	155,584 36
" " "	1887	5,800 00	204,237 45	155,303 37
" " "	1888		229,639 95	158,363 62
" " "	1889		247,559 44	171,369 56
" " "	1890		266,485 85	160,971 78
" " "	1891		257,990 08	174,258 05
" " "	1892	8,300 49	289,706 38	157,442 69
" " "	1893		226,422 17	162,690 42
" " "	1894		226,891 06	158,533 83
" " "	1895		232.905 19	149,654 78
" " "	1896		225,138 56	146,476 54
" " "	1897		240,489 90	153,443 13
" " "	1898	17,541 88	231,418 74	158,950 61
" " "	1899	22,000 00	218,053 01	165,012 03
" " "	1900	53,546 02	220,931 81	174,738 73
" " "	1901	280,173 93	261,766 24	193,883 48
" " "	1902	475,997 94	270,159 97	197,999 93
" " "	1903	829,414 18	259,637 82	217,714 24
" " "	1904	698,877 47	335,695 44	234,390 03
" " "	1905	591,412 65	370,464 44	217,330 61
" " "	1906	496,124 89	294,253 16	257,270 57
" " "	1907	91,710 52	283,148 50	215,434 97
Total		*7,307,364 86	7,849,739 36	5,303,305 39

* Agrees with Public Accounts Balance Sheet, 1906-1907, page 4.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

CANADIAN PACIFIC RAILWAY.

	Year.	Construction, including subsidy of $25,000,000.	Working Expenses.	Revenue received.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation...	.....	....	.....	... .
" since " ...	1868	....	....	.. . .
" " " ...	1869	.....	... .	....
" " " ...	1870	.....	....	.....
" " " ...	1871	30,148 32	....	.....
" " " ...	1872	489,428 16	....	.....
" " " ...	1873	561,818 44	.....	..... .
" " " ...	1874	310,224 88	....	. .....
" " " ...	1875	1,546,241 67	.....	... .
" " " ...	1876	3,346,567 06	... .	.....
" " " ...	1877	1,691,149 97	.....	....
" " " ...	1878	2,228,373 13	....	.....
" " " ...	1879	2,240,285 47	....	.. ..
" " " ...	1880	4,044,522 72	78,892 01	104,975 69
" " " ...	1881	4,968,503 93	236,944 98	291,498 06
" " " ...	1882	(1) 4,589,075 79	1,786 20	....
" " " ...	1883	(2)10,033,800 04	266 09	....
" " " ...	1884	(3)11,192,722 02	327 02	.....
" " " ...	1885	(4) 9,900,281 53	.....	.....
" " " ...	1886	(5) 3,672,584 81	.....	....
" " " ...	1887	(6) 915,057 49	... .	.....
" " " ...	1888	52,098 65	.....	.. ..
" " " ...	1889	86,716 07	.....	.....
" " " ...	1890	40,980 54	....	.....
" " " ...	1891	37,367 00	....	.. . .
" " " ...	1892	66,211 39	.....	....
" " " ...	1893	413,836 49	....	.....
" " " ...	1894	146,539 87	.....	. ...
" " " ...	1895	49,209 77	.. ..	.....
" " " ...	1896	65,669 49	.....	.....
" " " ...	1897	14,054 50	....	.. ..
" " " ...	1898	692 17	....	.....
" " " ...	1899	8,418 53	....	....
" " " ...	1900	236 11	.....	....
" " " ...	1901	8,978 87	.....	.....
" " " ...	1902	448 70	....	..... .
" " " ...	1903	.. ..	....	.....
" " " ...	1904	33,076 39	....	.....
" " " ...	1905	.....	.....	....
" " " ...	1906	....	.....	.....
" " " ...	1907	.....	.....	.....
Total.....	...	*62,785,319 97	318,216 30	396,473 75

* Agrees with Public Accounts Balance Sheet, 1906-1907, page 8.

(1)	Including.....	$ 2,210,000 00	on account subsidy.
(2)	"	5,323,076 60	"
(3)	"	7,254,208 27	"
(4)	"	6,862,201 00	"
(5)	"	2,890,427 00	"
(6)	"	460,087 13	"
		†$25,000,000 00	

† *See* also Statement No. 3, page 50, for the expenditure.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

ANNAPOLIS AND DIGBY RAILWAY.

	Year.	Capital.	Income Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation..			
" since "	1868		
" " "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
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" " "	1889	9,847 27	
" " "	1890	381,942 75	
" " "	1891	196,869 36	
" " "	1892	26,129 89	
" " "	1893	2,190 62	
" " "	1894	1,675 36	
" " "	1895	570 55	
" " "	1896		
" " "	1897	41,457 29	
" " "	1898		
" " "	1899		
" " "	1900		
" " "	1901		8,381 82
" " "	1902		
" " "	1903		
" " "	1904		
" " "	1905		
" " "	1906		
" " "	1907		
Total		*660,683 09	8,381 82

* Of this amount Parliament voted under 52 Vic., chap. 8, the sum of $500,000 as a subsidy to the Western Counties Railway.

W. C. LITTLE,
Accountant.

Department of Railways and Canals,
Ottawa, July 5, 1907.

DRUMMOND COUNTY RAILWAY.

——	Year.	Construction.	Working Expenses.
		$ cts.	$ cts.
Government expenditure prior to Confederation	...		
" since "	1868		
" " "	1869		
" " "	1870		
" " "	1871		
" " "	1872		
" " "	1873		
" " "	1874		
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" " "	1897		
" " "	1898		
" " "	1899		
" " "	1900	1,459,000 00	
" " "	1901		
" " "	1902	5,000 00	
" " "	1903		
" " "	1904		
" " "	1905		
" " "	1906		
	1907		
Total.....	.....	*1,464,000 00	

* Included in total costs of Intercolonial Railway system, page 33.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

YUKON TERRITORY WORKS.

(Stikine Teslin Railway.)

	Year.	Construction.
		$ cts.
Government expenditure prior to Confederation		
" since "	1868	
" " "	1869	
" " "	1870	
" " "	1871	
" " "	1872	
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" " "	1874	
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" " "	1896	
" " "	1897	
" " "	1898	
" " "	1899	
" " "	1900	
" " "	1901	
" " "	1902	283,323 55
" " "	1903	
" " "	1904	
" " "	1905	
" " "	1906	
" " "	1907	
Total		*283,323 55

*Agrees with Public Accounts Balance Sheet, 1906-1907, page 8.

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENTS OF THE ACCOUNTANT.

National Transcontinental Railway.

	Year.	Construction.
		$ cts.
Government expenditure prior to Confederation		
" since "	1868	
" " "	1869	
" " "	1870	
" " "	1871	
" " "	1872	
" " "	1873	
" " "	1874	
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" " "	1898	
" " "	1899	
" " "	1900	
" " "	1901	
" " "	1902	
" " "	1903	
" " "	1904	6,249 40
" " "	1905	778,491 28
" " "	1906	1,841,269 95
" " "	1907	5,537,867 50
Total		*8,163,878 13

* Agrees with Public Accounts Balance Sheet, 1906-1907, page 8.

W. C. LITTLE,
Accountant.

Department of Railways and Canals,
Ottawa, July 5, 1907.

SESSIONAL PAPER No. 20

STATEMENTS OF THE ACCOUNTANT.

Canada Eastern Railway.

	Year.	Construction.
		$ cts.
Government expenditure prior to Confederation		
" since "	1868	
" " "	1869	
" " "	1870	
" " "	1871	
" " "	1872	
" " "	1873	
" " "	1874	
" " "	1875	
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" " "	1895	
" " "	1896	
" " "	1897	
" " "	1898	
" " "	1899	
" " "	1900	
" " "	1901	
" " "	1902	
" " "	1903	
" " "	1904	
" " "	1905	800,000 00
" " "	1906	
" " "	1907	
Total		* 800,000 00

* Included in total cost of Intercolonial Railway system, page 33.

W. C. LITTLE,
Accountant.

Department of Railways and Canals,
Ottawa, July 5, 1907.

STATEMENT showing amount expended on Capital Account on Railways.

Railways.	—	—
	$ cts.	$ cts.
Intercolonial	73,012,989 53	
Cape Breton	3,860,679 14	
Oxford and New Glasgow	1,949,283 69	
Eastern Extension	1,324,042 81	
Drummond County	1,464,000 00	
Montreal and European Short Line	333,942 72	
Canada Eastern	800,000 00	
		82,744,937 89
Carleton Branch		48,410 48
Prince Edward Island		7,307,364 86
Canadian Pacific		62,785,319 97
Annapolis and Digby		660,683 09
Yukon Territory Works (Stikine-Teslin Ry.)		283,323 55
National Transcontinental		8,163,878 13
Governor General's Car		56,538 82
Total		162,050,456 79

Memo. re Recapitulation—Railways.

Total cost as per statement above	162,050,456 79
Add amounts transferred from Capital to Consolidated Fund, Intercolonial Railway, see statement, page 33	296,872 90
Agreeing with total of construction, as per statement, page 47	162,347,329 69

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

RECAPITULATION—GOVERNMENT RAILWAYS.

——	Year.	Construction.	Working Expenses.	Revenue.
		$ cts.	$ cts.	$ cts.
Government expenditure prior to Confederation		13,881,460 65	.....	.....
" since "	1868	483,353 65	359,961 08	420,752 58
" " "	1869	282,615 18	387,548 47	455,022 76
" " "	1870	1,729,381 49	445,208 75	471,245 09
" " "	1871	2,946,930 45	442,993 31	565,713 52
" " "	1872	5,620,569 67	595,076 22	622,900 56
" " "	1873	5,763,268 81	1,011,892 60	703,458 26
" " "	1874	3,925,123 69	1,847,925 24	893,430 17
" " "	1875	5,018,427 85	1,581,934 24	886,087 42
" " "	1876	4,497,434 75	1,497,128 22	966,922 42
" " "	1877	3,209,502 16	1,890,268 80	1,285,110 27
" " "	1878	2,643,741 73	2,032,873 05	1,514,846 38
" " "	1879	2,507,053 71	2,233,496 34	1,419,955 60
" " "	1880	6,109,077 14	1,851,489 26	1,739,137 25
" " "	1881	5,577,236 73	2,220,421 39	2,200,486 25
" " "	1882	5,175,046 61	2,310,638 54	2,237,583 39
" " "	1883	11,707,619 02	2,636,551 70	2,541,205 41
" " "	1884	14,013,074 89	2,613,508 87	2,551,937 97
" " "	1885	11,224,244 54	2,749,710 53	2,624,243 07
" " "	1886	4,443,220 17	2,819,973 50	2,628,336 35
" " "	1887	1,846,887 18	3,152,650 40	2,840,747 88
" " "	1888	1,765,582 11	3,621,076 62	3,166,253 22
" " "	1889	2,709,857 37	3,513,063 67	3,167,542 67
" " "	1890	2,392,767 99	3,846,044 42	3,203,874 11
" " "	1891	1,184,317 34	3,949,263 73	3,181,888 56
" " "	1892	417,425 73	3,748,597 77	3,136,393 51
" " "	1893	712,917 44	3,288,629 62	3,262,505 62
" " "	1894	585,749 01	3,226,208 13	3,179,019 57
" " "	1895	376,814 83	3,197,846 17	3,129,450 37
" " "	1896	324,774 72	3,254,442 64	3,140,678 47
" " "	1897	204,624 31	3,195,959 58	3,060,074 38
" " "	1898	270,990 85	3,507,248 88	3,313,847 10
" " "	1899	1,112,348 47	3,696,612 31	3,940,570 11
" " "	1900	3,309,130 42	4,665,228 06	4,774,161 87
" " "	1901	3,922,989 37	5,739,051 54	5,213,381 24
" " "	1902	5,386,611 24	5,861,099 54	5,918,990 43
" " "	1903	3,083,680 86	6,474,134 20	6,584,598 77
" " "	1904	2,619,059 86	7,599,958 57	6,627,255 51
" " "	1905	6,125,481 79	8,906,154 35	7,050,892 11
" " "	1906	6,102,565 74	7,893,653 49	7,950,552 97
" " "	1907	7,174,370 17	6,328,745 65	6,248,311 00
Total	.....	*162,387,329 69	130,194,269 45	118,819,364 19

* Total amount paid on construction. $162,387,329 69

Less amount received from the City of St. John, N.B., as purchase of the Carleton Branch Railway..... 40,000 00

Total cost of construction.... †$162,347,329 69

† Agreeing with amount expended on Capital, see page 46.

W. C LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

STATEMENT showing Miscellaneous Expenditure, yearly, by the Department of Railways and Canals.

Year ending.	CHARGEABLE TO INCOME.			CHARGEABLE TO REVENUE.			Total, Yearly Expenditure
	Canals.	Railways.	General.	Canals.	Railways.	General.	
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1868			6,305 66	12,000 00		2,416 66	20,722 32
1869			8,367 52	12,000 00		1,000 00	21,367 52
1870			7,853 03	18,698 89		7,679 78	34,231 70
1871			34,773 72	12,018 98			46,792 70
1872			20,049 50	12,208 76			32,258 26
1873			36,891 74	12,099 44		6,889 20	55,880 38
1874			40,098 84	12,959 25		5,428 98	58,487 07
1875			35,579 24	12,047 43		5,620 17	53,246 84
1876			42,920 10	86 08		5,690 28	48,696 46
1877				51 87	43,639 97		43,691 84
1878	1,860 00			556 00		34,388 59	36,804 59
1879							
1880	2,561 55			323 16			2,884 71
1881	2,338 41			5,535 22			7,873 63
1882				9,826 23			9,826 23
1883	11,781 27			6,978 54			18,759 81
1884	7,486 62	62,256 58		8,305 41			78,048 61
1885	16,725 47	11,003 38		1,210 61			28,939 46
1886	20,323 62	10,383 59		776 30			31,483 51
1887	20,873 21	23,545 34		649 04			45,067 59
1888	34,533 07	22,898 90		5,799 83			63,231 80
1889	10,091 87	16,552 64		5,207 64			31,852 15
1890	16,426 69	50,909 74		49,550 21			116,886 64
1891	16,925 31	16,314 41		56,922 05			90,161 77
1892	6,540 49	19,062 51		65,074 07			90,677 07
1893	8,498 41	4,313 73	28,640 93	63,965 54			105,418 61
1894	4,178 85	4,855 11	15,746 31	60,265 22			85,045 49
1895	10,695 48	13,221 27	19,304 87	69,769 56			103,991 18
1896	10,893 40	6,562 20	25,194 21	70,340 22			112,990 03
1897	2,937 47	5,118 99	25,142 90	62,777 12		597 39	96,573 87
1898	1,719 69	8,327 96	28,042 10	56,284 42	1,400 00		95,774 17
1899	1,318 79	67,005 86	22,085 19	66,850 29			157,260 13
1900	11,873 35	33,496 99	22,802 18	58,836 57			127,009 09
1901	12,267 99	28,658 78	33,986 68	61,938 61			136,852 06
1902	3,658 23	21,752 58	34,138 50	65,770 65			125,319 96
1903	2,491 84	15,570 43	35,398 00	63,175 19			116,635 46
1904	3,730 79	85,353 17	36,262 32	66,067 30			191,413 58
1905	1,498 14	97,507 00	38,660 52	64,515 07			202,180 73
1906	9,160 44	99,018 80	37,484 64	62,171 45			207,835 33
1907	9,687 55	92,115 62	34,183 75	66,251 27			202,238 19
	263,078 00	815,805 58	669,912 45	1,270,863 49	45,039 97	69,711 05	3,134,410 54

W. C. LITTLE,
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, July 5, 1907.

SESSIONAL PAPER No. 20

RECAPITULATION—RAILWAYS AND CANALS, TO MARCH 31, 1907

Expenditure.

Chargeable to Capital Account—			
Railways, *see* Statement page 46		$ 162,050,456 79	
Canals " " 28		91,734,718 21	
			$ 253,785,175 00
Chargeable to Consolidated Fund—			
*Railway Subsidies as per Statement No. 3, page 50		$ 35,578,502 54	
Income Account—			
Intercolonial Railway *see* page 32	$ 280,000 00		
Add transferred from Capital " 33	296,872 90		
Railways " 48	815,805 58		
Canals " 28	4,579,080 95		
" " 48	263,078 00		
General, Railways and Canals " 48	669,912 45		
		$ 6,904,749 88	
Revenue Account—			
Canals—Operating and Maintaining Staff, *see* page 28	$ 10,231,111 00		
Canals—Repairs, *see* page 28	8,151,491 29		
" " 48	1,270,863 49		
Railways—Working Expenses, *see* page 47	130,194,269 45		
" " 48	45,039 97		
General—Railways and Canals " 48	69,711 05		
		$149,962,486 25	
			$192,445,738 67
Total Expenditure on Railways and Canals			$446,230,913 67

EXPENDITURE AS ABOVE SEPARATED AS BETWEEN RAILWAYS AND CANALS.

Railways.

Capital Account	$ 162,050,456 79	
Consolidated Fund	167,210,490 44	
		$ 329,260,947 23

Canals.

Capital Account	$ 91,734,718 21	
Consolidated Fund	24,495,624 73	
		$ 116,230,342 94

General, Common to Both.

Consolidated Fund	739,623 50
Total expenditure on Railways and Canals	$446,230,913 67

REVENUE, SEPARATED AS BETWEEN RAILWAYS AND CANALS.

Railways—Revenue received from July 1, 1867, to March 31, 1907, (for details *see* page 47)	$118,819,364 19
Canals " " " " " 28)	13,618,586 47
Total Revenue, Railways and Canals	$132,437,950 66

*This amount does not include the subsidy of $25,000,000 to the Canadian Pacific Railway, nor the amount $660,683.09 expended on the Annapolis and Digby Railway, both of which are included in Capital Account, nor the annual payment of $119,700 to the Provincial Government of Quebec, being interest at the rate of 5 per cent on the sum of $2,394,000 up to 1905, granted by 47 Vic. Ch. 8 (1884) and the annual payment of $107,730, being interest at the rate of 4½ per cent since and including 1905 on the said sum of $2,394,000, for the line between Ottawa and Quebec which sum was transferred to the Public Debt as a liability, and is dealt with by the Finance Department, (see Public Accounts 1898-04, page X. and page 79, 1906.)

W. C. LITTLE,
Accountant.

Department of Railways and Canals,
Ottawa, July 5, 1907.

Statement showing Subsidies voted for Railways as to which contracts have been entered into and payments made up to March 31, 1907.

Subsidies Voted.			Railways.	Payments.																										Total March 31, 1907.
Authority.		Amount.		1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99	1899-00.	1900-1901.	1901-1902	1902-1903.	1903-1904	1904-1905.	1905-1906.	1906-1907	
		$ c.		$	$	$	$	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
46 Vic., chap. 25		156,800 00	International Railway, Quebec	111,001				6,960 00		3,610 00																				156,800 00
53	do	2																												
48	do	14																												
46	do	25																												
48-49	do	58																												
49	do	10																												
50-1	do	24																												
51	do	3																												
52	do	3																												
53	do	2																												
54-5	do	8																												
57-8	do	1																												
46	do	25																												
49	do	10	Kingston, Napanee and Western Railway, formerly Napanee, Tamworth and Quebec Railway, Ontario	32,000	57,660					93,741 00	7,600 00		1,856 10	13,932 80															208,732 80
50-1	do	24																												
52	do	3																												
53-6	do	5																												
47	do	8																												
51	do	3	Pontiac Pacific Junction Railway, Quebec		49,000	41,000	40,580	24,158 00							18,760 00													193,578 00
53	do	2																												
46	do	25																												
47	do	8	Caraquet Railway, N.B		32,000	76,800	61,200	40,050 00	13,950 00																			224,000 00
50-1	do	24																												
47	do	8																												
48	do	3																												
52	do	3	Great Northern Railway, Quebec		23,088					20,000 00	9,500 00	24,100 00			32,000 00	32,000 00			32,000 00		345,328 11		37,777 20						557,793 31
53	do	2																												
56	do	2																												
57-8	do	1																												
47	do	8																												
48	do	5	Kingston and Pembroke Railway, Ontario		48,000																									48,000 00
47	do	14																												
46	do	21	Northern and Pacific Junction Railway, Ontario		154 440	1,051,560	78,370			35,460 00	600 00																			1,320,000 00
53	do	2																												
47	do	8																												
48-9	do	50																												
49	do	10																												
48-9	do	59	Canada Eastern Railway, formerly Northern and Western Railway, N.B., including also Chatham Branch Railway			128,000	18,200	159,400 00	6,500 00	100 00		21,439 84			30,400 00						5,000 00								374,539 84
51	do	3																												
57-8	do	4																												
62-3	do	7																												
47	do	3																												
51	do	3	Quebec Central Railway, Quebec			60,342											288,000 00												348,342 00
53	do	2																												
48-9	do	59																												
53	do	2	Montreal and Sorel Railway, Quebec			64,362	4,950			6,719 50	17,116 07																		93,757 57
48-9	do	59																												
49-50	do	59																												
50-1	do	24	Montreal and Champlain Junction Railway, Quebec			30,000		16,400 00	36,700 00	5,400 00				16,100 00															163,600 00
51	do	3																												
46	do	23				38,400						41,252 82																	82,652 82
51	do	3	Elgin, Petitcodiac and Havelock Railway, N.B			44,252 82																							
47	do	8	St. Louis and Richibucto Railway, N.B			22,400																							22,400 00
48-9	do	59																												
49	do	10	Canada Atlantic Railway, Ontario			48,480	44,384		9,191 20	149,813 00	30,188 00																		282,355 20
50-1	do	24																												
47	do	6	Esquimalt and Nanaimo Railway, B.C			422,520	327,480																						750,000 00
47	do	8	Erie and Huron Railway, Ontario				96,000																						96,000 00
47	do	8																												
46	do	23																												
47	do	8	Baie des Chaleurs Railway, Quebec				250,000	50,500 00	75,200 00	148,675 00				95,825 00															620,000 00
52	do	3																												
48-9	do	59	New Brunswick and Prince Edward Railway, N.B				97,440	16,000 00																					113,440 00
50-1	do	24	St. Lawrence, Lower Laurentian and Saguenay Railway, Quebec, now Laurentian Railway				64,430	28,383 00			32,003 00	92,781 00																	217,600 00
49	do	10	L'Assomption Railway, Quebec				11,200																						11,200 00
49	do	10																												
50-1	do	24																												
56	do	2	Great Eastern Railway, Quebec				19,200				16,300 00	4,845 00																	40,345 00
53	do	2																												
47	do	8																												
52	do	3	Irondale, Bancroft and Ottawa Railway, Ontario				15,000						17,000 00	32,000 00	32,000 00		48,000 00												144,000 00
48	do	10																												
50-1	do	21	Buctouche and Moncton Railway, N.B				40,480	29,673 57		4,366 00	1,600 43			34,580 00															101,600 00
47	do	8																												
52	do	3	Alma and Southern Railway, N.B				1,000	18,128 57	1,387 06		10,684 37	18,900 00																	50,460 00
50-1	do	21																												
57-8	do	4	Lake Temiscamingue Colonization Railway, Quebec				14,400	3,000 00	9,000 00	26,300 00					233,198 95	17,000 75	6,476 25											310,335 95
49	do	10																												
48	do	3	Joggins Railway, N.S					26,136 78		9,761 22	1,600 00																		37,500 00
50-1	do	24																												
48	do	14																												
48-9	do	58																												
50-1	do	24	Temiscouata Railway, N.B., and Quebec					249,684 00	163,216 00	74,300 00	82,770 00	51,830 00	21,150 00																645,950 00
51	do	3																												
53	do	2																												
48-9	do	59																												
50-1	do	24	Leamington and St. Clair Railway, Ontario					32,000 00	19,200 00																				51,200 00
49	do	10																												
49	do	10	Toronto, Grey and Bruce Railway, Ontario					14,656 00																					14,656 00
50-1	do	24	Dominion Lime Co., Quebec					11,840 00	3,520 00																				15,360 00
49	do	10																												
53	do	2	West Ontario Pacific Railway and Ontario and Quebec Railway					60,000 00	800 00	189,200 00	6,000 00																		256,000 00
50-1	do	24																												
52	do	3																												
53	do	2	Drummond County Railway, Quebec					15,057 00	13,815 00	12,423 00	136,000 00	6,105 00	13,435 00		22,096 00		156,000 00											423,936 00
57-8	do	4																												
48-9	do	59																												
53	do	2																												
54-5	do	8	Brockville, Westport and Sault Ste. Marie Railway, Ontario						45,000 00		47,400 00	12,600 00																35,000 00	140,000 00
57-8	do	4																												
49	do	10																												
53	do	2	Montreal and Lake Maskinongé Railway, Quebec						19,200 00	20,080 10	1,500 00																		41,280 00
50-1	do	24	South Norfolk Railway, Ontario						54,400 00																				54,400 00
50-1	do	24	Guelph Junction Railway, Ontario						46,000 00																				46,000 00
48-9	do	59	Belleville and North Hastings Railway, Ontario						21,888 00																				21,888 00
49	do	10																												
51	do	10	Hereford Railway, Quebec						63,000 00	91,300 00																			155,300 00
52	do	3																												
50-1	do	24																												
55-6	do	5	Lake Erie and Detroit River Railway, Ontario						106,500 00	11,900 00			230,331 00								137,120 00								473,351 00
62-3	do	7																												
50-1	do	24																												
51	do	3	Beauharnois Junction Railway, Quebec						31,651 00	4,250 00						3,500 00												82,400 00
16	do	2																												
50-1	do	24																												
55-6	do	5	St. Catharines and Niagara Central Railway, Ontario						26,640 00		11,760 00																		38,400 00
57-8	do	1																												
52	do	3	Fredericton and St. Mary's Railway Bridge Co., N.B						30,000 00																				30,000 00
50-1	do	24	Harvey Branch Railway Co., N.B						5,553 57																				5,553 57
55-6	do	5																												
61	do	1	Nova Scotia Central Railway Co., N.S							219,160 00	3,360 00	8,360 00							4,500 00									235,320 00
50-1	do	24	Cumberland Railway and Coal Co., N.S							29,400 00	10,450 00																	39,850 00
53	do	3	Pontiac and Renfrew Railway Co., Ontario							9,800 00	3,800 00																	13,600 00
52	do	3																												
53-4	do	8	Thousand Islands Railway Co., Ontario							10,400 00				14,000 00								5,440 00						29,840 00
52	do	3																												
56	do	3	Quebec, Montmorency and Charlevoix Railway Co., Quebec							65,000 00					30,400 00														95,000 00
52	do	3																												
50-1	do	24	St. Clair Frontier Tunnel Co., Ontario						173,000 00	143,400 00	58,600 00																		375,000 00
57-8	do	4																												
51	do	3	Brantford, Waterloo and Lake Erie Railway, Ontario							36,620 00	16,100 00					4,700 00													57,600 00
53	do	2																												
53	do	2	Port Arthur, Duluth and Western Railway, Ontario								87,000 00	70,075 00	114,125 00																271,200 00
50-1	do	24																												
53	do	2																												
54-5	do	8	Montreal and Ottawa Railway, Ontario								49,960 00		23,640 00				32,000 00	48,000 00	46,400 00										192,000 00
57-8	do	4																												
50-1	do	24																												
52	do	3	Cornwallis Valley Railway, N.S								42,670 00	1,130 00																	44,800 00
52	do	3																												
57-8	do	6	Ottawa, Northern and Western Railway, Quebec (formerly Ottawa and Gatineau Railway								87,682 00	38,700 00	104,380 00	53,376 00															470,688 00
60-1	do	1																				8,192 00		118,368 00				
47	do	8																												
51	do	3																												
53	do	3																												
53	do	2	Central Railway, N.B								75,630 00	63,612 54							66,761 00									226,012 54
57-8	do	4																												
61	do	1																												
62-3	do	1																												
53	do	2	Montreal and Western Railway, Quebec								76,140 00	32,253 00	133,385 00	119,486 00															361,270 00
52	do	3	Parry Sound Colonization Railway									30,400 00	28,839 00		68,780 00	24,800 00													152,819 00
57-8	do	4																												
52	do	3	Shuswap and Okanagan Railway, B.C									162,260 00			640 00	300 00													163,200 00
54-5	do	8																												
53	do	2	Tobique Valley Railway, N.B									73,040 00	41,074 46	19,311 54															134,016 00
55-6	do	5																												
53	do	2	Columbia and Kootenay Railway, B.C									88,800 00																	88,800 00
53	do	2	Waterloo Junction Railway, Ontario									32,800 00																	32,800 00
53	do	2	Orford Mountain Railway, Quebec									32,000 00																	32,000 00
53	do	2	St. Lawrence and Adirondack Railway, Quebec									46,256 00	24,448 00	297 66	52,800 00										38,250 00	45,761 50			168,814 50
55-6	do	5																												
55-6	do	5	*40,000 00 New Glasgow Iron, Coal and Railway Company, N.S										32,945 84	5,484 16				84,480 00											122,910 00
56	do	2	United Counties Railway, Quebec													1,140 00												39,840 00
57-8	do	4																												
55-6	do	5	*21,600 00 Philipsburg Junction Railway Quarry Company, Quebec											88,073 00	42,738 15	52,926 85	2,700 00	1,488 00											188,816 00
55-6	do	5	*439,400 00 Ottawa, Arnprior and Parry Sound Railway, Ontario											18,688 00	2,012 00														23,712 00
56	do	2												101,120 00	240,264 00	80,000 00		327,232 00	22,080 00		2,112 00							773,712 00
57-8	do	4																												
60-61	do	4	38,400 00 Montfort Colonization Railway, Quebec											32,000 00	35,200 00			33,840 00	64,400 00										167,440 00
55-6	do	5																												
55-6	do	5	48,000 00 Lotbinière and Mégantic Railway, Quebec																												
57-8	do	4												35,200 00	38,100 00		22,400 00												96,000 00
56	do	2	Grand Trunk, Georgian Bay and Lake Erie Railway, Ontario												39,744 00														39,744 00
55-6	do	5	Canadian Pacific Railway, Revelstoke to Arrow Lake, B.C												28,400 00		52,600 00												80,000 00
55-7	do	4	Nakusp and Slocan Railway, B.C												117,760 00														117,760 00
55-7	do	5	Dominion Coal Company, N.S												32,000 00	55,838 00													87,838 00
56	do	2	Oshawa Railway and Navigation Company, Ontario													22,400 00													22,400 00
57-8	do	4	*51,200 00 Tilsonburg, Lake Erie and Pacific Railway, Ontario													51,200 00													117,431 48
56	do	2	*11,200 00 St. Stephen's and Milltown Railway, N.B													9,035 89		5,212 11	10,913 00	7,159 48			14,160 00	4,000 00					14,648 00
57-8	do	4	*38,400 00 Gulf Shore Railway Company, N.B														28,633 05	23,064 15											51,697 20
57-8	do	4	9,000 00 Cap de la Madeleine Railway, Quebec														7,424 00												7,424 00
56	do	2	32,000 00 Ontario, Belmont and Northern Railway Company, Ontario														50,720 00												50,720 00
			Coast Line of Nova Scotia, now Halifax and Yarmouth Railway															90,400 00					63,000 00	9,600 00					163,000 00
			Ottawa and New York Railway Company, Ontario															33,600 00	138,781 00		30,000 00								202,381 00
60-61	do	4	Canadian Pacific Railway Co., B.C. (Crow's Nest Pass)															453,750 00	2,322,500 00	340,000 00	205,621 00	22,046 00	50,000 00						3,393,917 00
63	do	3	Grand Trunk Railway Co., "Victoria Jubilee Bridge," Quebec																										3,408,720 00
																		131,268 52	68,331 05	72,028 63	228,371 75							500,000 00
			Restigouche and Western Railway Co., N.B. now International																										
			East Richelieu Railway Co., Quebec																32,000 00	14,939 00									178,108 07
			South Shore Railway, Quebec																69,922 00						30,208 00		50,070 07	51,200 00	63,952 00
			Pembroke Southern Railway, Ontario																	30,890 10	88,400 00					89,491 16	3,456 46			293,240 31
			Musquapsi Valley Railway Co., Quebec																	64,000 00									64,000 00
			Inverness and Richmond Co., N.S., now Inverness Ry. and Coal Co																		5,376 00								5,376 00
			Canadian Northern Railway Co., Ontario, Man. and N.W.T																		132,500 00	86,800 00	91,770 53	67,170 44					368,545 97
			Canadian Pacific Railway Co. (Dejestonic Branch)																		537,660 00	339,891 10	57,485 00	374,166 00					1,909,132 00
			Central Ontario Railway Co., Ontario																		92,800 00	67,200 00							160,000 00
			Midland Railway Co., N.S																		67,200 00								67,200 00
2 3 V., chap. 7		1,000,000 00																			170,284 00		190,186 30	1,750 00			4,967 70	367,188 00
63-4	do	8	Quebec Bridge Co., Quebec																										
																					74,570 00	107,430 00	132,353 33					374,353 33
60-1	do	1	St. Mary River Railway Co., N.W.T																		78,000 00			40,950 00	32,134 00			148,084 00
63-4	do	2	Pontiac and Pacific and Ottawa and Gatineau Railway Co's. (Interprovincial Bridge over Ottawa River)																										
1 Ed. VII, ch. 7			Atlantic and Lake Superior Railway, Quebec																		212,500 00								212,500 00
1	do		Montreal and Province Line Railway, Quebec																			14,800 00	52,333 98	37,000 00	12,336 86		21,621 82	144,993 12
62-3 Vic., ch. 7			York and Carleton Railway, N.B																			58,560 00							58,560 00
62-3	do	7																				18,336 00							18,336 00
63-4	do	8	Algoma Central and Hudson Bay Railway, Ontario																										
1 Ed. VII, ch. 7																													
																						350,621 10	202,912 00		311,440 00			924,076 00
			Cape Breton Extension Railway, N.S																										
			Canadian Pacific Ry. Co. (Kootenay and Arrowhead Branch)																				65,289 00	117,120 00					182,409 00
			" " (Selkirk Branch)																				42,771 00	17,842 85	4,170 15	89,076 00			153,860 00
			" " (Dynent Branch)																				83,200 00						83,200 00
			" " (Waskada Branch)																				22,336 00						22,336 00
			Manitoulin and North Shore Railway Co., Ont																				50,480 00	13,520 00					64,000 00
			Bay of Quinté Railway, Ont																				32,000 00						32,000 00
			Brice Mines and Algoma Railway, Ont																				19,200 00	49,920 00			72,602 45		141,722 45
			Maganetawan River Railway Co., Ont																				28,800 00						53,920 00
			Chateauguay and Northern Railway, Quebec																				3,552 00		25,120 00				3,552 00
			Canadian Pacific Railway Co. (Pheasant Hill Branch)																					191,593 00		116,009 00	81,224 75	391,819 75
			Halifax and South western Railway Co., N.S																					376,624 00	55,576 00				435,200 00
			Northern Colonization Railway Co., Quebec																					185,425 00	291,812 00	170,512 00	268,107 20		921,853 20
			New Brunswick Coal and Railway Co., N.B																					18,384 00		75,376 00			134,060 00
			Schomberg and Aurora Railway Co., Ont																					48,000 00					48,000 00
			Lindsay, Bobcaygeon and Pontypool Railway Co., Ont																					46,144 00					46,144 00
			Middleton and Victoria Beach Railway Co., N.S																						183,173 66				185,173 66
3 Ed. VII, c. 57			Beersville Coal and Railway Co., N.B																						47,789 00	50,303 80	27,667 20		125,760 00
3 Ed. VII, c. 67			James Bay Railway Co., Ont																						29,736 00				29,736 00
4 Ed. VII, c. 30			Nicola, Kamloops and Similkameen Coal and Railway Co																							651,264 00	420,608 00	1,071,872 00
6 Ed. VII, c. 43			Canadian Pacific Railway (Stayner ville Branch)																							110,592 00		110,592 00
			Klondike Mines Railway																								9,600 00		9,600 00
																										96,000 00		96,000 00
		185,600 annually for 20 years	Atlantic and Northwestern Railway	208,000	463,245	2,171,249	1,406,633	1,027,041 92	846,721 83	1,491,595 72	1,079,105 87	1,011,615 93	624,701 67	1,043,285 10	1,123,019 10	648,145 49	250,355 30	1,228,334 78	3,014,629 05	520,129 35	2,325,728 85	1,207,339 00	1,276,822 34	1,650,278 45	1,083,029 53	1,450,074 37	1,136,767 48	29,194,452 54
										185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	185,600 00	3,338,800 00
57 Vic., ch. 14		1,925,250 00	Canada Central Railway																										

PART II

SKETCH MAPS OF DOMINION RAILWAYS AND CANALS

AND

REPORT OF THE CHIEF ENGINEER

COMPRISING REPORTS OF

GENERAL MANAGER OF GOVERNMENT RAILWAYS AND SUPERINTENDENTS OF CANALS

1906-1907

DEPARTMENT OF RAILWAYS AND CANALS.

LIST OF ANNUAL REPORTS UNDER THIS COVER.

1. M. J. Butler, Chief Engineer Railways and Canals, General Report.
2. D. Pottinger, General Manager Government Railways, I.C.R.
   W. B. MacKenzie, Chief Engineer, I.C.R.
   T. C. Burpee, Engineer of Maintenance, I.C.R.
   G. R. Joughins, Superintendent of Motive Power, I.C.R.
   S. L. Shannon, Comptroller, I.C.R.
3. D. Pottinger, General Manager Government Railways, Windsor Branch.
   T. C. Burpee, Engineer of Maintenance, Windsor Branch.
   S. L. Shannon, Comptroller, Windsor Branch.
4. D. Pottinger, General Manager Government Railways, P.E.I. Ry.
   W. B. MacKenzie, Chief Engineer, P.E.I. Ry
   G. A. Sharp, Superintendent, P.E.I. Ry.
   W. S. Poole, Mechanical Superintendent, P.E.I. Ry.
   W. T. Huggan, Accountant and Auditor, P.E.I. Ry.
5. E. Marceau, Superintending Engineer, Quebec Canals.
6. L. N. Rheaume, St. Lawrence Canals.
7. W. A. Stewart, Superintendent of Operation, St. Lawrence Canals.
8. J. L. Weller, Superintending Engineer, Welland Canal.
9. F. B. Fripp, Engineer in Charge, Sault Ste. Marie.
10. F. B. Fripp, Acting Superintendent, Sault Ste. Marie.
11. A. J. Grant, Superintending Engineer, Trent Canal.
12. A. T. Phillips, Superintending Engineer, Rideau Canal
13. J. H. Devereaux, Lock Master, St. Peter's Canal.
14. J. H. McClellan, Superintendent, Trent Canal.
15. E. J. Walsh, Trent Canal Surveys.
16. C. Schreiber, C.M.G., Report on Western Division National Transcontinental Railway.

CHIEF ENGINEER'S REPORT.

DEPARTMENT OF RAILWAYS AND CANALS,
OFFICE OF THE CHIEF ENGINEER,
OTTAWA, July 1, 1907.

SIR,—I have the honour to submit my annual report for the fiscal year ended March 31, 1907, covering, however, the works of construction up to June 1, 1907.

First.—The annual report of the General Manager of Government Railways, to which are attached the reports of the Chief Engineer, the Engineer of Maintenance, the Mechanical Superintendent of the Intercolonial division and the reports of the Superintendent of the Prince Edward Island division, with statements of accounts prepared by the Accountants of these roads.

Second.—The annual reports of the Superintending Engineers of the several canals, and of the Superintendents of the Sault Ste. Marie canal, the St. Peter's canal, the Trent canal and of the St. Lawrence canals. And the engineer in charge of the improvements to the entrance to the Sault Ste. Marie canal.

The following shows the length of the government railways in operation on March 31, 1907.

INTERCOLONIAL RAILWAY.

MAIN LINE AND BRANCHES.

	MILES.
Halifax to Truro	61·83
Dartmouth Branch	12·38
Truro to Moncton	124·03
Moncton to St. John	89·36
Point du Chêne Branch	11 38
Moncton to Campbellton	185·16
Campbellton to Ste. Flavie	105·09
Indian Town Branch	13·51
Ste. Flavie to Rivière du Loup	83·28
Rivière Ouelle Branch	6·25
Rivière du Loup to Point Lévis	115·47
Hadlow to Chaudière Curve	5·62
Chaudière to Ste. Rosalie	115 95
St. Charles Junction to Chaudière Junction	16·98
Nicolet Branch	14·61
Dalhousie Branch	7·00

Pictou to Oxford Junction	69·10
Brown's Point to Stellarton	12·23
Junction near New Glasgow to Pictou Landing	7·76
Pugwash Junction to Pugwash	4·70
Truro to Mulgrave	123·07
Point Tupper to Sydney	91·48
North Sydney Branch	4·38
Sydney to Sydney Mines	2·70
Fredericton to Loggieville	125·00
	1,408·32

LEASED.

Length of main line from Point Lévis to Hadlow	1·50	
Chaudière Curve to Chaudière	1·18	
Ste. Rosalie Junction to Montreal	37·62	
	40·30	
		1,448·62

FREIGHT BRANCHES AND Y'S OWNED.

Y's at Windsor Junction, Truro, Brown's Point, Oxford Junction, Painsec Junction, Moncton, Chaudière, Springhill Junction, Stellarton, Mulgrave, North Sydney Junction, Newcastle, Rivière Ouelle, St. Charles Junction, St. Leonard Junction, Ste. Rosalie Junction	3·62
Switch near North Street to D.W.T., Halifax	·85
Halifax Cotton Factory	2·10
Dartmouth Station to end of line	2·29
Stewiacke Wharf Branch	·87
Sydney Station to Wharf	·90
North Sydney Station to Wharf	·78
Switch near Pictou Landing to Coal Wharf	·75
Pictou Station to Wharf	·15
Pictou Station to Copper Crown Smelter	·72
Logan's Tannery Siding	·48
Pugwash Station to Wharf	·07
Sackville Wharf Branch	·47
Dorchester Wharf Branch	1·00
Moncton Wharf Branch	1·00
Courtney Bay Branch	2·39
St. John Water Front Extension	·44
St. John Station to Deep Water Wharf	·28
Newcastle Wharf Branch	1·75
Dalhousie Station to Wharf Branch	·40

Campbellton Wharf Branch	·43	
Rimouski Wharf Branch	2·00	
Trois Pistoles Spur	2·38	
Rivière du Loup Wharf Branch	4·35	
St. Pacome Spur	1:27	
Nicolet Station to Wharf	2·05	
Carmel Branch, Main Line to Village (estimated)	1:05	
Blackville to Indian Town	8:50	
		43·34
		1,491·96

WINDSOR BRANCH.

Windsor Junction to Windsor		32

PRINCE EDWARD ISLAND RAILWAY.

Souris to Tignish	166	
Mount Stewart to Georgetown	24	
Charlottetown to Royalty Junction	5	
Emerald Junction to Cape Traverse	13	
Alberton to Cascumpec Wharf	1	
Charlottetown to Murray Harbour	52:3	
Montague Junction to Montague	6·2	
		267·5
Total length of government railways		1,791·46

The result of the nine months' operations of the government railways may be stated as follows:—

Name of Railway.	Mileage in Operation.	Amount.		Profit.	Loss.
			$ cts.	$ cts.	$ cts.
Intercolonial Division	1,448	Working expenses	6,030,171 83		
		Earnings	6,248,311 00	218,139 17	
Windsor Branch	32	One-third earnings	45,440 52		
		Maintenance	15,425 32	30,015 20	
Prince Edward Island Division	267	Working expenses	283,148 50		
		Earnings	215,434 97		67,713 53
Total, miles	1,747	Deduct loss from profit		67,713 53	
		Net profit		180,440 84	

The maintenance of the roads and rolling stock has received careful attention, and both roads continue to be in efficient condition; the rolling stock is being brought up to the modern standard.

The working expenses of the Intercolonial Railway given above include the $105,000 rental paid to the Grand Trunk Railway.

The gross earnings of the government railways for the last two periods of nine months compare as follows:—

	1905-06.	1906-07.
Intercolonial Division	$5,586,155 21	$6,248,311 00
Windsor Branch	39,762 63	45,440 52
Prince Edward Island Division	189,443 31	215,434 97
	$5,815,361 15	$6,509,186 49

Showing an increase in the gross earnings of $693,825.34.

The gross working expenses of the government railways for the last two periods of nine months compare as follows:—

	1905-06.	1906-07.
Intercolonial Division	$5,755,923 90	$6,030,171 83
Windsor Branch	14,514 32	15,425 32
Prince Edward Island Division	217,812 74	283,148 50
Total	$5,988,250 98	$6,328,745 65
Gross working expenses of government railways	5,988,250 98	6,328,745 65
Gross earnings of government railways	5,815,361 15	6,509,186 49
Excess of earnings over working expenses, which include rental, $105,000, Grand Trunk Railway		$180,440 84

Showing an increase in working expenses for the nine months, compared with the previous year of $340,494.67, which is made up of the following:—

Intercolonial Division	$274,247 91
Windsor Branch	911 00
Prince Edward Island Division	65,335 76
	$340,494 67

INTERCOLONIAL DIVISION.

COMPARATIVE Statement of Ocean-borne Passenger Business done at the Port of Halifax during the fiscal period of nine months ended March 31, 1907.

Name of Steamer.	1905-1906. No. of Passengers.			Name of Steamer.	1906-1907. No. of Passengers.		
	1st Class.	2nd Class.	Total.		1st Class.	2nd Class.	Total.
Pretorian	112	1,849	1,961	Pretorian	Nil.	667	667
Parisian	45	1,938	1,983	Parisian	Nil.	1,578	1,578
Southwark	Nil.	1,648	1,648	Southwark	Nil.	1,120	1,120
Corinthian	43	1,288	1,331	Corinthian	Nil.	1,669	1,669
Virginian	172	1,945	2,117	Virginian	71	1,727	1,798
Siberian	1	1,078	1,079	Siberian	Nil.	1,065	1,065
Mongolian	Nil.	884	884	Mongolian	Nil.	577	577
Dahome	3	30	33	Corean	Nil.	58	58
Corean	Nil.	546	546	Numidian	Nil.	880	880
Numidian	31	1,245	1,276	Victorian	40	2,467	2,507
Victorian	85	1,416	1,501	Canada	42	1,889	1,931
Canada	31	986	1,017	Tunisian	130	2,363	2,493
Carthaginian	8	1,361	1,369	Sardinian	Nil.	669	669
Tunisian	246	3,719	3,965	Laurentian	Nil.	1,074	1,074
Sardinian	Nil.	443	443	Pomeranian	Nil.	289	289
Laurentian	Nil.	717	717	Dominion	10	2,141	2,151
Pomeranian	Nil.	447	447	Sicilian	Nil.	1,449	1,449
Norsman	Nil.	1,746	1,746	Sarmatian	Nil.	169	169
Dominion	38	1,171	1,209	Empress of Ireland	6	Nil.	6
Sicilian	56	2,835	2,891	Empress of Britain	25	Nil.	25
Kensington	Nil.	2,287	2,287	Ionian	58	1,880	1,938
Sarmatian	Nil.	214	214	Sicilian	Nil.	1,449	1,449
City of Vienna	5	305	310	Vancouver	Nil.	780	780
Total	876	30,098	30,974	Total	382	24,521	24,903

*NOTE.—Of the total number 24,903, 15,922 travelled over the Intercolonial Railway as follows: 11,213 via St. John and Canadian Pacific, 4,779 via Intercolonial Railway, long haul.

COMPARATIVE Statement of Ocean-borne Freight Traffic during the fiscal period of nine months ended March 31, 1907.

Name of Line of Steamers.	WINTER OF 1905-1906.			Name of Line of Steamers.	WINTER OF 1906-1907.		
	Measurement tons.	Weight tons.	Total tons.		Measurement tons.	Weight tons.	Total tons.
Allan Line	5,414	3,656	9,070	Allan Line	7,329	4,672	12,001
Furness Line	4,257	8,728	12,985	Furness Line	2,307	7,204	9,511
Canadian Pacific	388	1,121	1,509	Canadian Pacific	Nil.	Nil.	Nil.
Canada-Jamaica Steamship Line	.....	873	873	Canada-Jamaica Steamship Line	Nil.	1,862	1,862
Pickford and Black	15	8,942	8,957	Pickford and Black	40	13,844	13,884
Various other lines and Tramp Steamers	.....	.....	.....	Various other lines and Tramp Steamers	Nil.	Nil.	Nil.
Total	10,074	23,320	32,394	Total	9,676	27,582	37,258

The above statement shows an increase of 4,864 tons of ocean-borne freight traffic for the winter season of 1906-07, as compared with the winter season of 1905-06.

The following is a statement of the quantity and classes of the rolling stock purchased on capital account during the fiscal year ending March 31, 1907:—

—	Engines.	Dining cars.	Passenger Car Stock.				Conductor's van.	Oil tank cars.	Box, cattle and refrigerator cars.	Platform cars.	Coal cars of 3 several kinds.	Snow ploughs.	Wing ploughs.	Flangers.	Ballast plough.	Auxiliary cars.	Air brake instruction car.	Steam cranes for coal.
			1st class sleeping and parlour.	1st class.	2nd class sleepers.	2nd class.	Baggage and mail postal.											
	23	..	.....	....	....	....	....	....	....	....	.....	115	....	....	....	..	...	.....	..

The following is a statement of the quantity and classes of rolling stock which have been rebuilt during the year ended March 31, 1907, at the cost of revenue to maintain the work :—

—	Engines.	Passenger Car Stock.					Conductor's van.	Box car.	Platform cars.	Refrigerator cars.	Coal cars of three several kinds.	Snow ploughs.	Wing ploughs.	Oil tank.	Rotary snow ploughs	Auxiliary.
		1st class sleeping and parlour.	1st class.	2nd class sleepers.	2nd class.	Baggage and express.										
Total....	....	.....	1	....	....	....	....	9	11	....	2	....	....	1	....	..

SESSIONAL PAPER No. 20

The following table shows the working expenses, gross earnings, the tonnage of freight and number of passengers carried each year since July 1, 1876, when the road was first opened as a through line to the west :—

Year.	Average Miles in Operation.	Working Expenses.	Gross Earnings.	Profit.	Loss.	Tons of Freight carried.	No. of Passengers carried.
		$ c.	$ c.	$ c.	$ c.		
1876-77	714	1,661,673 55	1,154,445 33		507,228 22	421,327	313,420
1877-78	714	1,816,273 56	1,378,946 78		432,326 78	522,710	318,957
1878-79	714	2,010,183 22	1,294,009 69		716,083 53	510,861	640,101
1879-80	829	1,603,429 71	1,506,298 48		97,131 23	561,924	581,483
1880-81	840	1,759,851 27	1,760,393 92	542 65		725,777	631,245
1881-82	840	2,069,657 48	2,079,262 66	9,605 18		838,956	779,994
1882-83	840	2,360,373 27	2,370,910 10	10,547 83		970,961	878,600
1883-84	887	2,377,433 62	2,384,414 92	6,981 30		1,009,237	944,636
1884-85	941	2,519,751 56	2,441,203 66		78,547 90	989,986	957,228
1885-86	946	2,583,999 67	2,450,093 88		133,905 79	1,023,788	932,880
1886-87	977	2,922,369 62	2,660,116 93		262,252 69	1,143,020	942,784
1887-88	971	3,366,781 74	2,983,336 05		383,445 69	1,288,823	1,040,163
1888-89	971	3,244,647 73	2,967,801 00		276,847 73	1,218,877	1,136,272
1889-90	971	3,560,575 74	3,012,739 87		847,835 87	1,368,819	1,219,233
1890-91	1,094	3,662,341 94	2,977,395 38		684,946 56	1,304,534	1,298,304
1891-92	1,142	3,439,377 00	2,945,441 97		493,935 03	1,264,575	1,297,732
1892-93	1,142	3,045,317 50	3,065,499 09	20,181 59		1,388,080	1,292,878
1893-94	1,142	2,981,671 98	2,987,510 27	5,838 29		1,342,710	1,301,062
1894-95	1,142	2,936,902 74	2,940,717 95	3,815,21		1,276,816	1,352,667
1895-96	1,142	3,012,827 62	2,957,640 10		55,187 52	1,379,618	1,471,866
1896-97	1,145	2,925,968 67	2,866,028 02		59,940 65	1,296,028	1,501,690
1897-98	1,201	3,327,648 51	3,117,669 85		209,978 66	1,424,576	1,523,444
*1898-99	1,301	3,675,686 21	3,738,331 44	62,645 43		1,750,761	1,603,095
*1899-1900	1,301	4,431,404 69	4,552,071 71	120,667 02		2,151,208	1,791,754
*1900-01	1,301	5,460,422 64	4,972,235 87		488,186 77	2,111,310	2,025,295
*1901-02	1,301	5,574,563 30	5,671,385 91	96,822 61		2,385,816	2,186,226
*1902-03	1,315	6,196,653 19	6,324,323 72	127,670 53		2,790,737	2,404,230
*1903-04	1,321	7,239,982 04	6,339,231 43		900,750 61	2,664,149	2,663,156
*1904-05	1,446	8,508,826 75	6,783,522 83		1,725,303 92	2,782,257	2,810,960
*1905-06	1,446	7,581,914 36	7,643,829 90	61,915 54		3,156,189	2,737,160
*1906-07	1,448	6,030,171 83	6,248,311 00	218,139 17		2,606,073	2,044,847

* The working expenses include the rental paid for leased line.

INTERCOLONIAL RAILWAY.

STATEMENT of Earnings from the several sources named from June 30, 1876, to March 31, 1907.

Year.	Miles in Operation.	Passenger Traffic.	Freight Traffic.	Mails and Sundries.	Total.
		$ cts.	$ cts.	$ cts.	$ cts.
1876-7	714	460,368 15	607,564 99	86,512 21	1,154,443 33
1877-8	714	475,256 82	801,709 82	101,985 07	1,378,946 78
1878-9	714	451,893 29	752,490 85	88,715 55	1,294,009 69
1879-80	829	490,338 66	915,486 50	100,473 32	1,506,298 48
1880-1	840	545,114 48	1,113,872 21	101,407 23	1,760,493 92
1881-2	850	651,296 94	1,303,496 00	124,470 72	2,079,262 66
1882-3	940	741,992 70	1,487,601 98	141,326 40	2,379,910 10
1883-4	887	775,783 77	1,461,390 37	147,240 78	2,383,414 92
1884-5	941	747,285 13	1,542,052 10	151,566 35	2,441,203 66
1885-6	946	765,900 03	1,523,487 72	160,706 13	2,450,093 88
1886-7	977	828,328 28	1,677,971 59	153,817 06	2,660,116 93
1887-8	971	884,448 07	1,932,877 85	166,010 13	2,983,336 95
1888-9	971	906,246 47	1,909,094 44	152,460 09	2,967,801 00
1889-90	971	895,094 53	1,964,646 86	152,998 48	3,012,739 87
1890-1	1,094	962,316 88	1,854,629 88	160,448 62	2,977,395 38
1891-2	1,142	961,427 94	1,803,529 03	180,485 00	2,945,441 97
1892-3	1,132	1,002,912 74	1,868,823 84	184,468 80	3,065,499 09
1893-4	1,142	958,915 13	1,834,126 34	193,762 51	2,987,502 27
1894-5	1,142	963,914 44	1,782,608 54	194,194 97	2,940,717 95
1895-6	1,142	971,426 26	1,788,813 18	167,400 66	2,957,640 10
1896-7	1,145	979,005 57	1,687,050 42	199,972 03	2,866,028 02
1897-8	1,201	1,053,864 64	1,857,740 06	206,065 15	3,117,669 85
1898-9	1,315	1,167,453 16	2,348,096 58	222,781 70	3,738,331 44
1899 1900	1,315	1,404,469 87	2,912,790 52	234,811 32	4,552,071 91
1900-1	1,315	1,607,166 79	3,121,006 15	244,062 93	4,972,235 87
1901-2	1,315	1,770,941 13	3,644,513 42	255,931 36	5,671,385 91
1902-3	1,315	1,927,916 97	4,128,255 00	268,151 75	6,324,323 72
1903-4	1,321	2,021,568 40	4,041,122 48	276,540 55	6,339,231 43
1904-5	1,446	2,105,066 75	4,373,178 75	305,277 53	6,783,522 83
1905-6	1,446	2,297,716 52	5,019,805 53	326,307 85	7,643,829 90
1906-7	1,448	1,952,438 88	4,032,745 00	263,127 12	6,248,311 00

INTERCOLONIAL RAILWAY.

STATEMENT showing the Number of Tons of Local and Through Freight Carried from June 30, 1876, to March 31, 1907.

Year.	Miles in Operation.	Local Freight.	Through Freight.	Total.
1876-7	714	The information for these		421,327
1877-8	714	years was destroyed		522,710
1878-9	714	when the general offices		510,861
1879-80	829	in Moncton were burned.		561,924
1880-1	840			725,777
1881-2	840	571,684	267,272	838,956
1882-3	840	537,025	443,936	970,961
1883-4	887	584,581	424,656	1,009,237
1884-5	941	506,574	483,362	989,936
1885-6	946	580,076	443,712	1,023,788
1886-7	977	633,455	509,565	1,143,020
1887-8	971	727,599	561,224	1,288,823
1888-9	971	624,436	594,441	1,218,877
1889-90	971	756,696	612,123	1,368,819
1890-1	1,094	797,492	507,042	1,304,534
1891-2	1,142	750,783	513,792	1,264,575
1892-3	1,142	1,030.628	357,452	1,388,080
1893-4	1,142	966,114	376,596	1,342,710
1894-5	1,142	901,374	366,442	1,267,816
1895-6	1,142	1,011,229	368,389	1,379,618
1896-7	1,145	927,167	368,859	1,296,028
1897-8	1,201	1,053,569	381,007	1,434,576
1898-9	1,315	1,351,569	399,192	1,750,761
1899-1900	1,315	1,713,928	437,280	2,151,208
1900-1	1,315	1,633,671	477,639	2,111,310
1901-2	1,315	1,914,551	471,265	2,385,816
1902-3	1,315	2,239,993	550,744	2,790,737
1903-4	1,321	2,123,261	540,888	2,664,149
1904-5	1,446	2,119,528	662,729	2,782,257
1905-6	1,446	2,413,863	742,326	3,156,189
1906-7	1,448	1,996,869	609,204	2,606,073

INTERCOLONIAL RAILWAY.

STATEMENT of the Number of Local and Through Passengers carried from June 30, 1876, to March 31, 1907, a period of nine months.

Year.	Miles in Operation.	Number of Local Passengers.	Number of Through Passengers.	Total.
1876-7	714	The information for these years was destroyed when the general offices in Moncton were burned		613,420
1877-8	714			618,957
1878-9	714			640,101
1879-80	829			581,483
1880-1	840			631,245
1881-2	840	647,534	132,460	779,994
1882-3	840	728,186	150,414	878,600
1883-4	887	784,715	159,921	944,636
1884-5	941	812,028	145,200	957,228
1885-6	946	784,817	148,063	932,880
1886-7	977	814,032	128,752	942,784
1887-8	971	948,324	91,839	1,040,163
1888-9	971	1,050,592	85,680	1,136,272
1889-90	971	1,112,695	91,531	1,219,233
1890-1	1,094	1,203,814	94,490	1,298,304
1891-2	1,142	1,198,649	99,083	1,297,732
1892-3	1,142	1,188,827	104,051	1,292,878
1893-4	1,142	1,216,027	85,035	1,301,062
1894-5	1,142	1,272,284	80,383	1,352,667
1895-6	1,142	1,386,803	85,063	1,471,866
1896-7	1,145	1,416,631	85,059	1,501,690
1897-8	1,201	1,438,590	89,854	1,523,444
1898-9	1,315	1,504,652	98,443	1,603,095
1899-1900	1,315	1,678,858	112,896	1,791,754
1900-1	1,315	1,905,599	119,696	2,025,295
1901-2	1,315	2,061,196	125,030	2,186,226
1902-3	1,315	2,255.013	149,217	2,404.230
1903-4	1,321	2,447,843	215,313	2,663,156
1904-5	1,446	2,589,928	221,032	2,810,960
1905-6	1,446	2,491,472	245,688	2,737,160
1906-7	1,448	1,853,126	191,721	2,044,847

SESSIONAL PAPER No. 20

The following table shows the number of tons of coal carried over the Intercolonial Railway from the Nova Scotia collieries to Ste. Rosalie, Montreal and St. John for points west thereof, and to local stations in each year since the road was opened as a through line:—

Year.	For the West.			To Local Stations.	Total.
	Via Ste. Rosalie.	Via Montreal.	Via St. John.		
1876-7				103,420	103,420
1877-8				97,043	97,043
1878-9		300		112,232	112,532
1879-80		1,097		135,369	136,466
1880-1		6,102	4,022	174,483	184,607
1881-2		18,015	11,779	218,364	248,158
1882-3		12,837	22,206	227,380	262,423
1883-4		32,014	19,534	252,014	293,562
1884-5		133,440	1,773	213,791	349,004
1885-6		171,170	21,150	215,272	407,592
1886-7		192,871	27,536	233,178	453,585
1887-8		183,704	36,228	309,727	529,659
1888-9		160,026	27,923	338,538	526,487
1889-0		164,453	25,126	366,967	554,546
1890-1		113,996	69,213	344,829	498,038
1891-2		35,447	5,918	392,441	433,806
1892-3		136,868	3,775	402,653	543,296
1893-4		102,273	8,028	367,390	478,691
1894-5		67,082	7,865	310,253	385,200
1895-6		53,124	9,681	369,708	432,513
1896-7		38,395	12,305	331,469	382,172
1897-8		9,084	9,796	351,069	369,949
1898-99		4,644	5,399	484,163	494,206
1899-1900		3,495		599,714	603,289
1900-1	136			506,454	506,590
1901-2	1,131	5,763	3,640	546,986	557,520
1902-3	2,200	7,817	6,775	725,727	742,519
1903-4	2,260	637	513	691.346	694,761
1904-5	800	265	5,022	596,290	602,377
1905-6	7,542	1,625	661	610,444	620,272
1906-7	1,737	2,808	3,252	624,833	632,630

TABLE showing the number of bushels of grain carried during each year for shipment at Halifax since the road was opened as a through line to the west.

Year.	Bushels.		Total.	Year.	Bushels.		Total.
	Via Chaudière.	Via St. John.			Via Chaudière.	Via St. John.	
1876–77				1892–93	155,306	197,666	352,975
1877–78				1893–94	Nil.	8,026	8,026
1878–79				1894–95	"	Nil.	Nil.
1879–80				1895–06	"	"	"
1880–81				1896–97	"	"	"
1881–82				1897–98	8,000	"	8,000
1882–83	31,011		31,011	1898–99	30,000	"	30,000
1883–84	73,389		73,389	1899–1900	13,239	"	13,239
1884–85	300,901		300,901	1900–01	147	"	147
1885–86	389,122		389,122	1901–02	Nil.	"	Nil.
1886–87	575,880		575,880	1902–03	"	"	"
1887–88	69,021		69,021	1903–04	147,438	"	147,438
1888–89	129,725		129,725	1904–05	Nil.	"	Nil.
1889–90	502,012		502,012	1905–06	*170,000		170,000
1890–91	148,803	59,543	218,337	1906–07			Nil.
1891–92	845,997	519,500	1,265,497				

* Via Montreal.

TABLE showing the number of barrels of flour and meal carried during each year since the road was first opened as a through line to the west.

Year.	Barrels.	Year.	Barrels.
1876–77	254,710	1892–93	856,913
1877–78	557,778	1893–94	944,967
1878–79	630,329	1894–95	938,351
1879–80	535,248	1895–96	822,097
1880–81	672,310	1896–97	847,701
1881–82	692,095	1897–98	987,408
1882–83	983,916	1898–99	1,157,250
1883–84	817,134	1899–1900	1,234,077
1884–95	935,977	1900–01	1,292,106
1885–86	761,127	1901–02	1,311,707
1886–87	763,894	1902–03	1,521,540
1887–88	871,838	1903–04	1,607,050
1888–89	948,514	1904–05	1,769,480
1889–90	1,116,050	1905–06	1,882,630
1890–91	1,013.129	1906–07	1,531,140
1891–92	954,015		

TABLE showing the number of bushels of grain carried during each year since the road was first opened as a through line to the west.

Year.	Bushels.	Year.	Bushels.
1876-77	292,852	1892-93	1,514,619
1877-78	331,170	1893-94	1,304,684
1878-79	302,921	1894-95	1,036,384
1879-80	534,021	1895-96	1,064,385
1880-81	565,678	1896-97	1,093,499
1881-82	560,253	1897-98	1,551,372
1882-83	1,195,601	1898-99	2,595,353
1883-84	654,673	1899-1900	2,720,453
1884-85	734,902	1900-1901	3,535,364
1885-86	849,800	1901-02	2,959,761
1886-87	1,018,395	1902-03	3,392,252
1887-88	1,219,035	1903-04	2,788,772
1888-89	1,256,158	1904-05	3,317,910
1899-90	2,610,202	1905-06	2,924,226
1890-91	2,890,921	1906-07	2,231,864
1891-92	3,776,677		

TABLE showing the quantity of lumber in feet carried during each year over the road since it was first opened for traffic as a through line to the west.

Year.	Feet.	Year.	Feet.
1876-77	50,096,474	1892-93	181,211,013
1877-78	56,626,547	1893-94	200,507,949
1878-79	55,626,696	1894-95	202,247,269
1879-80	55,462,654	1895-96	226,332,715
1880-81	72,841,388	1896-97	243,355,725
1881-82	78,356,418	1897-98	354,093,816
1882-83	104,633,417	1898-99	306,554,031
1883-84	131,120,948	1899-1900	379,350,074
1884-85	138,493,675	1900-1901	396,858,964
1885-86	117,186,512	1901-02	428,051,029
1886-87	161.801,763	1902-03	459,231,589
1887-88	197,755,272	1903-04	465,379,803
1888-89	199,507,777	1904-05	518,434,310
1889-90	210,886,071	1905 06	572,878,600
1890-91	184,188,324	1906-07	452,602,703
1891-92	175,474,340		

TABLE showing the number of live stock carried during each year over the road since it was first opened for traffic as a through line to the west.

Year.	Number.	Year.	Number.
1876-77	34,414	1892-93	93,369
1877-78	46,498	1893-94	79,203
1878-79	47,584	1894-95	72,106
1879-80	70,990	1895-96	64,051
1880-81	61,574	1896-97	72,082
1881-82	73,479	1897-98	89,301
1882-83	68,338	1898-99	109,821
1883-84	60,090	1899-1900	92,813
1884-85	70,785	1900-01	95,923
1885-86	74,498	1901-02	98,495
1886-87	82,896	1902-03	127,060
1887-88	98,302	1903-04	113,006
1888-89	85,960	1904-05	110,670
1889-90	80,771	1905-06	106,589
1890-91	95,529	1906-07	97,381
1891-92	87,889		

TABLE showing the number of tons of ocean-borne goods to and from Europe carried over the road during each year since it was first opened for traffic as a through line.

Year.	Via Ste. Rosalie and from the West.	Via Montreal to and from the West.	Via St. John to and from the West.	To and from local Stations.	Total.
1876-77					
1877-78		14,949		3,405	18,354
1878-79		21,628		2,643	24,271
1879-80		21,073		4,952	26,025
1880-81		15,454		3,334	18,788
1881-82		21,607		4,168	25,775
1882-83		24,875		7,911	32,786
1883-84		19,696		6,533	26,229
1884-85		22,787		8,405	31,192
1885-86		13,464		8,216	21,680
1886-87		16,923		9,811	26,734
1887-88		41,864		8,878	50,742
1888-89		17,340		11,481	28,821
1889-90		9,895		11,730	21,625
1890-91		9,923		10,764	20,687
1891-92		9,719	17	23,835	33,571
1892-93		7,295	100	12,319	19,714
1893-94		3,023	204	13,455	16,682
1894-95		6,749	213	10,399	17,361
1895-96		3,767	314	16,748	20,829
1896-97		2,654	263	17,239	20,156
1897-98		5,950	1,637	18,633	26,220
1898-99		2,465	243	31,555	34,263
1899-1900		2,379	307	37,108	39,794
1900-01	322	6,860	1,142	155,514	163,838
1901-02	1,106	7,780	1,528	172,733	183,147
1902-03	817	11,925	1,194	124,695	138,631
1903-04	2,079	21,377	2,994	146,070	174,520
1904-05	284	15,325	3,687	85,853	105,149
1905-06	2,026	17,217	5,337	128,462	153,042
1906-07	1,384	15,922	436	110,447	128,219

SESSIONAL PAPER No. 20

TABLE showing the number of tons of raw and refined sugar carried over the road during each year since it was first opened as a through line.

Year.	Raw Sugar.					Refined Sugar.				
	Via Ste. Rosalie.	To Montreal for the West.	To St. John for the West.	To Local Stations	Total.	To Ste. Rosalie for the West.	To Montreal for the West.	To St. John for the West.	To Local Stations	Total.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77		340			340					
1877-78		186			186					
1878-79		1,041			1,041					
1879-80		12,220			12,220					
1880-81		13,872			13,872		4,022		2,902	6,924
1881-82		14,256		1,290	15,546		7,146		3,607	10,753
1882-83		9,465		508	9,973		11,126		5,497	16,623
1883-84		13,778		3,068	16,846		14,543		7,265	21,808
1884-85		10,381		3,661	14,042		18,024		8,445	26,469
1885-86		4,394		3,998	8,392		7,674		5,858	13,518
1886-87		20,450		8,500	28,950		15,044		8,395	23,439
1887-88		14,320		14,085	28,405		21,641		7,133	28,774
1888-89		24,358		7,160	31,518		12,955		11,120	24,075
1889-90		7,390		8,913	16,303		6,778		6,125	12,903
1890-91		5,088	4,670	8,215	17,973		10,130	468	5,996	16,594
1891-92		7,142	3,960	10,535	21,637		12,633	7,647	12,414	32,721
1892-93				10,137	10,137		8,327	6,456	7,840	22,623
1893-94				6,775	6,775		17,729	6,967	8,885	33,581
1894-95				10,342	10,342		13,351	15,819	4,695	33,865
1895-96				9,824	9,824		15,138	13,734	11,309	40,181
1896-97				4,925	4,925		5,694	8,069	6,957	20,720
1897-98							6,624	8,821	10,989	26,534
1898-99							8,138	2,193	15,833	26,164
1899-1900		96			96		9,795	257	19,655	29,907
1900-01		489			489	403	14,791	12	10,615	25.821
1901-02		90		11,553	11,643	3,101	6,831	861	18,839	29,632
1902-03		194		17,137	17,331	3,183	5,763	1,636	20,529	31,111
1903-04	357	875		7,495	8,727	6,013	8,628	879	29,400	44,920
1904-05	602	509	78	1,495	15,684	1,446	7,107	224	22,937	31,764
1905-06		715	68	9,308	10,091	4,235	12,268	176	24,780	41,459
1906-07		394		14,671	15,065	1,998	5,898	2,374	13,927	24,197

TABLE showing the number of tons of fresh and salt fish carried over the road during each year since it was opend as a through line.

Year.	Fresh Fish.					Salt Fish.				
	To Ste. Rosalie for the West.	To Montreal for the West.	To St. John for the West.	To Local Stations.	Total.	To Ste. Rosalie for the West.	To Montreal for the West.	To St. John for the West.	To local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77	.....	530	921	527	1,978	.....	551	1,848	802	3,201
1877-78	.....	596	1,015	474	2,085	.....	898	1,644	805	3,347
1878-79	.....	471	1,336	817	2,624	.....	988	1,038	1,048	2,974
1879-80	.....	519	1,362	453	2,334	.....	1,612	2,238	959	4,809
1880-81	.....	498	1,879	920	3,297	.....	2,418	937	1,051	4,406
1881-82	.....	475	1,619	957	3,051	.....	4,031	1,066	2,487	7,584
1882-83	.....	542	384	393	1,319	.....	3,229	759	1,354	5,412
1883-84	.....	838	1,682	412	2,932	.....	1,322	1,143	1,224	3,689
1884-85	.....	1,062	1,885	484	3,431	.....	3,563	3,600	1,596	8,759
1885-86	.....	1,669	1,645	902	4,216	.....	1,689	2,047	3,376	7,103
1886-87	.....	1,278	1,572	2,008	4,858	.....	3,236	569	1,747	5,552
1887-88	.....	1,533	1,477	1,031	4,041	.....	2,617	476	1,099	4,193
1888-89	.....	2,474	2,000	1,870	6,344	.....	3,070	7,746	2,994	13,810
1889-90	.....	2,235	1,787	2,111	6,223	.....	2,449	847	3,288	6,584
1890-91	.....	2,029	2,788	1,848	6,665	.....	1,953	1,917	3,236	7,106
1891-92	.....	1,367	1,746	547	3,660	.....	1,946	928	1,889	4,763
1892-93	.....	1,683	1,875	3,340	6,898	.....	3,262	1,811	2,176	7,249
1893-94	.....	1,959	2,192	2,224	6,375	.....	2,921	1,814	2,962	7,697
1894-95	.....	2,006	3,726	1,160	6,892	.....	2,075	1,849	5,285	10,209
1895-96	.....	1,966	3,059	1,319	6,344	.....	1,863	1,087	2,791	5,741
1896-97	.....	3,307	3,115	1,286	7,708	.....	2,168	1,176	2,536	5,880
1897-98	.....	3,575	3,703	1,052	8,330	.....	1,729	1,066	2,210	5,005
1898-99	.....	1,210	2,070	3,305	6,583	.....	1,651	1,198	3,625	5,474
1899-1900	.....	2,547	2,706	3,686	8,939	.....	2,421	1,563	2,659	6,643
1900-01	37	2,009	3,207	4,125	9,393	360	3,419	1,346	4,643	9,768
1901-02	219	3,013	4,373	5,477	13,082	283	3,150	1,413	5,196	10,042
1902-03	140	2,269	3,040	4,842	10,289	493	2,808	1,615	6,579	11,495
1903-04	539	1,939	3,588	5,002	11,068	225	2,359	564	5,848	8,996
1904-05	779	1,902	3,674	5,516	11,871	433	2,673	272	6,759	10,137
1905-06	284	2,748	2,439	7,706	13,177	683	2,740	346	6,994	10,763
1906-07	320	2,882	3,712	7,400	14,314	307	3,156	416	6,348	10,227

During the year 182·66 miles of 56, 58, 67, 80 and 110 lb. rails were taken up and replaced with 67 and 80 lb. rails; 466,759 ties and 272 sets of switches renewed.

Cost of road and equipment up to March 31, 1907.

On capital account—

Road, including $1,464,000 paid on account purchasing Drummond County Railway	$65,517,279 65
Rolling stock	17,227,658 24
Total	$82,744,937 89

The work of increased accommodation at the deep water terminus at Halifax is progressing, which facilitates the work of conducting the traffic.

Both the road and rolling stock have been efficiently maintained during the year.

Additions to the rolling stock continue to be made, as being a necessity for the efficient working of the traffic.

WINDSOR BRANCH.

This road continues to be operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company, the company receiving two-thirds of the gross earnings for working the traffic, and the government one-third of the gross earnings for maintaining the way and works.

Year.	Miles in operation.	One-third gross earnings.	Proportion of one-third gross earnings credited to line Windsor Junction to Halifax.	Proportion of one-third gross earnings credited to the Windsor Branch.	Maintenance expenses.	Profit.	Loss.
		$ cts.	$ cts	$ cts.	$ cts.	$ cts.	$ cts.
1880-81..	32	28,434 29	7,217 76	21,216 53	20,502 26	714 27	
1881-82..	32	28,461 07	7,407 88	21,052 19	13,099 55	7,953 64	
1882-83..	32	31,199 77	8,085 88	24,113 89	23,103 93	1,009 96	
1883-84..	32	30,428 39	7,409 46	23,018 93	22,140 86	878 07	
1884-85..	32	32,246 30	7,794 95	24,451 35	18,751 96	5,699 39	
1885-86..	32	31,185 63	7,527 52	23,658 11	19,229 49	4,428 62	
1886-87..	32	33,564 58	8,237 00	25,327 58	26,042 33	.....	714 75
1887-88..	32	32,242 85	6,689 30	24,553 55	24,040 33	513 22	
1888-89..	32	37,313 43	8,941 32	28,372 11	20,856 50	7,515 61	
1889-90..	32	39,544 19	9,381 73	30,162 46	18,982 82	11,179 64	
1890-91..	32	39,519 56	9,284 43	33,508 35	28,931 71	1,303 42	
1891-92..	32	42,891 23	9,382 38	30,235 13	19,514 37	13,994 48	
1892-93..	32	43,901 28	9,585 17	34,316 11	16,889 95	17,426 16	
1893-94..	32	41,834 70	8,859 23	32,975 47	17,645 09	15,330 38	
1894-95..	32	50,703 84	11,626 20	39,077 64	14,640 07	24,437 57	
1895-96..	32	47,456 74	10,894 91	36,561 83	16,476 46	20,985 37	
1896-97..	32	54,208 81	13,605 58	46,603 23	10,821 04	29,782 19	
1897-98..	32	48,892 21	11,665 57	37,226 64	18,181 09	14,045 01	
1898-99..	32	56,314 51	13,840 48	42,474 04	12,873 06	29,600 94	
1899-1900	32	62,266 61	14,925 18	47,351 43	12,891 56	34,459 87	
1900-01..	32	62,523 20	15,261 31	47,261 89	16,862 66	30,399 23	
1901-02	32	65,315 38	15,710 79	49,604 59	16,376 27	33,228 32	
1902-03..	32	56,417 38	13,856 57	42,560 81	17,843 19	24,717 62	
1903-04..	32	72,708 54	19,074 49	53,634 05	24,281 09	29,352 96	
1904 05..	32	66,798 46	16,759 79	50,038 67	26,863 16	23,175 51	
1905-06..	32	65,936 66	16,484 16	49,452 50	17,485 97	31,966 53	
1906-07..	32	61,597 30	16,156 78	45,440 52	15,425 32	30,015 20	

PRINCE EDWARD ISLAND.

CAPITAL ACCOUNT.

The cost of road and rolling stock up to March 31, 1907:—

Road, &c.	$6,712,032 35
Rolling stock	595,266 86
Total	$7,307,299 21

The rolling stock provided on capital account consisted of:—

Engines.	Passenger Car Stock.			Official cars.	Box, cattle and Refrigerator cars.	Platform cars and coal cars.	Conductors' vans.	Pay car.	Snow ploughs.	Flangers.
	1st class cars.	2nd class cars.	Baggage smoking and postal.							
27	23	19	14	1	248 21 3	147 22	4	1	10	9
					272	169				

The capital expenditure during the year amounted to $91,710.52, of which $70,316 was expended on increased accommodation at Charlottetown.

The following table shows the working expenses, the gross and net earnings, the tons of freight and number of persons carried each year since June 30, 1875, when the road was first opened for traffic:—

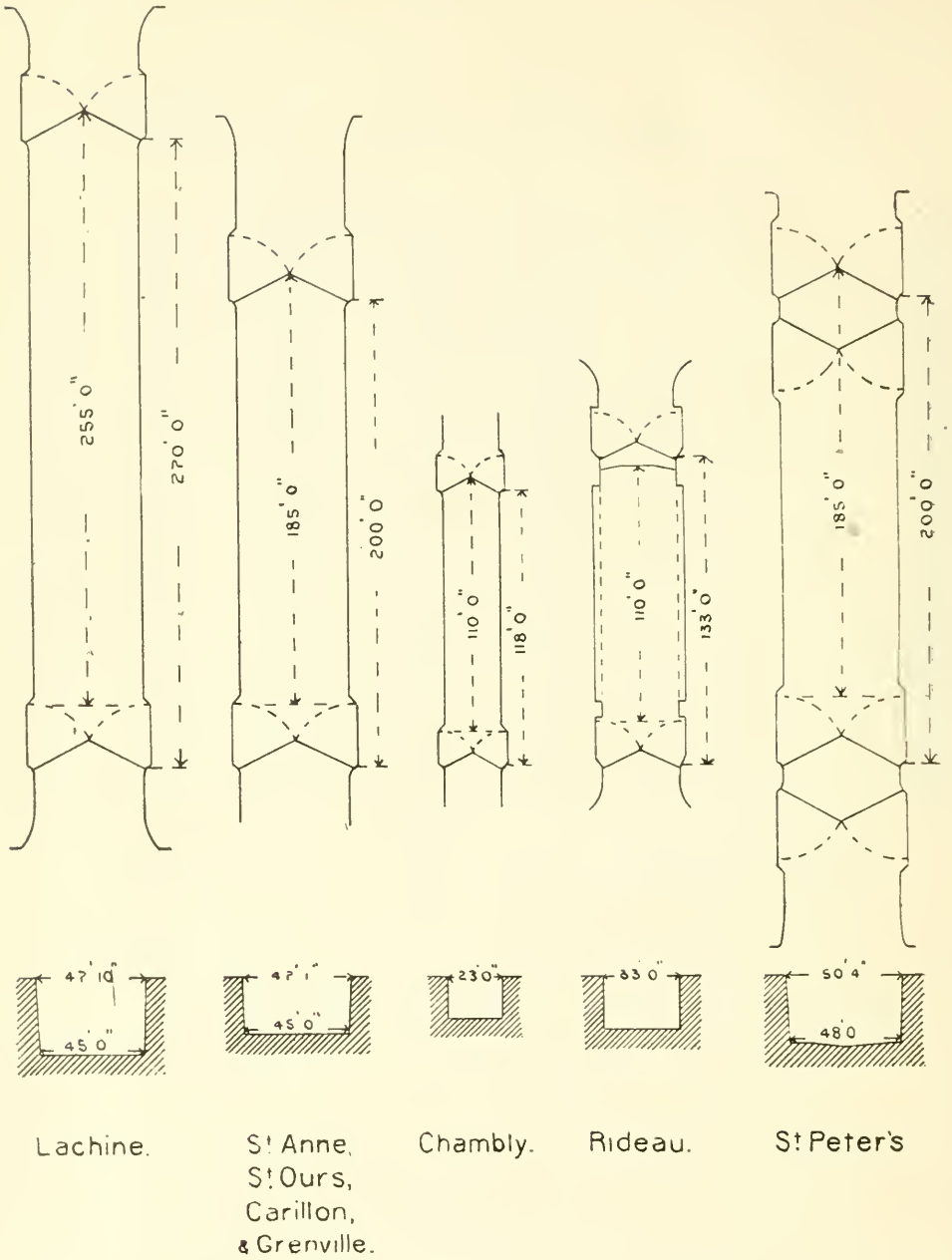
Year.	Miles in operation.	Working expenses.	Gross earnings.	Loss.	Tons of freight carried.	No. of passengers carried.
		$ cts.	$ cts.	$ cts.		
1875-76	199	214,930 43	118,060 96	96,869 47	28,358	93,964
1876-77	199	228,595 25	130,664 92	97,930 33	41,039	93,478
1877-78	199	221,599 49	135,899 60	85,699 89	38,668	111,428
1878-79	199	223.313 12	125,855 99	97,457 21	38,923	105,046
1879-80	199	164,640 55	113,851 11	50,789 44	37,208	90,533
1880-81	199	203,122 88	131,131 43	71,991 45	45,336	102,937
1881-82	199	228,259 97	137,267 54	90,922 43	48,315	118,436
1882-83	199	252,808 41	146,170 42	106,637 99	51,920	117,162
1883-84	199	236,428 13	144,504 12	91,924 01	51,841	118,988
1884-85	211	211,207 01	158,588 06	52,618 95	57,346	130,423
1885-86	211	216,744 34	155,584 36	61,159 98	57,913	120,374
1886-87	211	204,237 37	155,303 37	48,934 00	63,589	103,067
1887-88	211	229,639 95	158,365 62	71,276 33	59,603	131,246
1888-89	211	247,559 44	171,369 56	76,189 89	55,682	152,780
1889-90	211	266,485 85	160,971 78	105,514 07	51,604	133,099
1890-91	211	257,990 08	174,258 05	83,732 03	59,511	145,508
1891-92	211	289,706 38	157,442 69	132,263 69	51,065	139,389
1892-93	211	226,422 17	162,690 42	63,731 75	56,718	132,111
1893-94	211	226,891 06	158,533 83	68,357 23	53,577	123,727
1894-95	211	232,105 19	149,654 71	83,250 41	48,325	125,089
1895-96	211	225,138 56	146,476 54	78,662 02	46,395	122,586
1896-97	211	240,489 90	153,443 13	87,046 77	52,151	121,498
1897-98	211	231,418 74	158,950 61	72,468 13	57,539	126,510
1898-99	211	218,053 01	165,021 03	53,040 98	57,938	129,667
1899-1900	211	220.931 81	174,738 73	46,193 08	62,227	147,471
1900-01	211	261,766 24	193,833 48	67,883 76	73,696	157,793
1901-02	210	270,159 97	197,999 97	72,160 00	75,381	184,748
1902-03	209	259,637 82	217,714 24	41,923 58	80,582	205,265
1903-04	209	335,695 44	234,390 03	101,305 41	86,286	224,517
1904-05	209	370,464 44	217,330 61	153,133 83	75,969	235,194
1905-06	261	294,253 16	257,270 57	36,982 59	87,162	256,092
1906-07	267	283,148 50	215,434 97	67,713 53	67,144	232,371

Steel rails (50 and 56 lb. to yard) . . . . . 263·5
Iron rails (40 lb. to yard) 4

Total length of road . . . . . 267·5

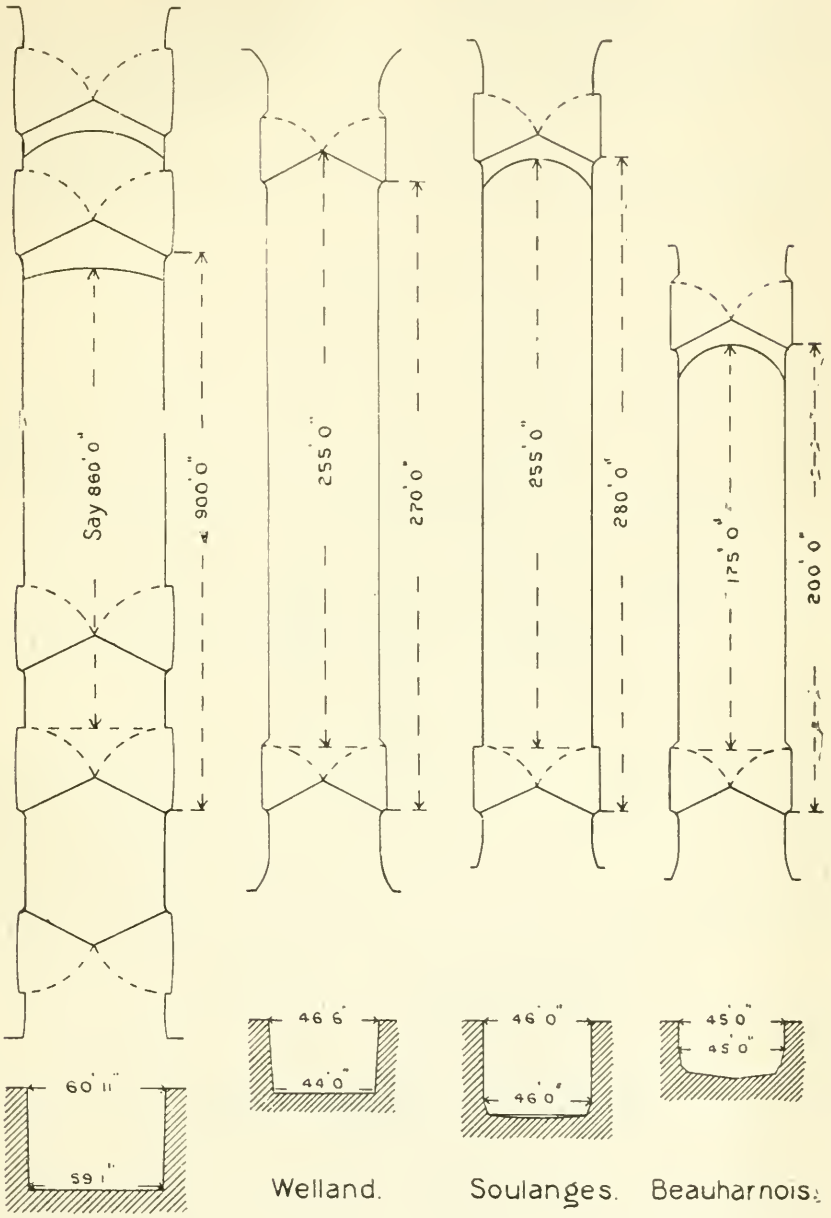
The road and rolling stock are in good running condition.

Plans and Sections showing the Dimensions of the Smallest Lock on each



There are no locks on the through route between Lake Superior and

of the Canadian Canal Systems except the Trent Canal, which is uncompleted.

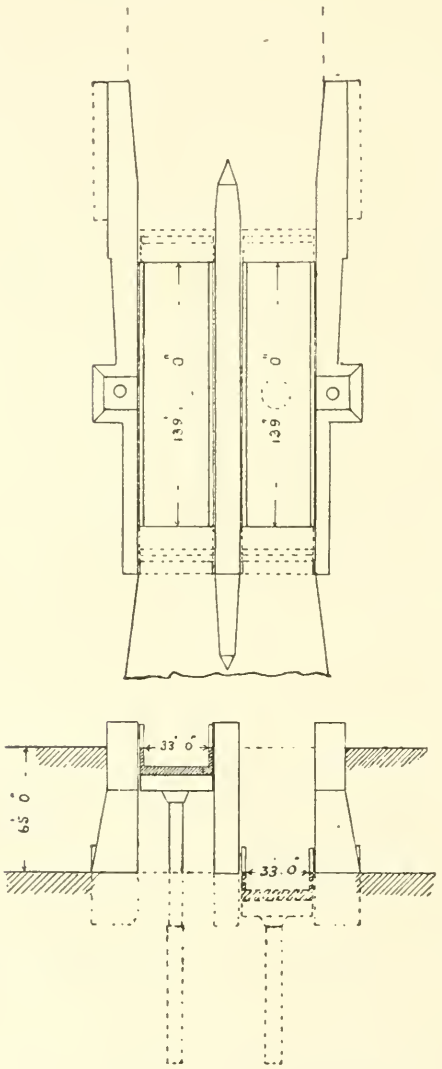


Montreal of less dimension than those of the Welland Canal Locks.

TRENT CANAL

Hydraulic Lift-Lock at Peterborough

65 Feet Lift



CANALS.

The preceding diagrams of the locks on the Lachine, Soulanges, Welland and Sault Ste. Marie canals practically give the key to the whole navigation between Montreal and Lake Superior. There are no locks to be passed of less dimensions than those of the Welland canal.

The dimensions of the locks of the Beauharnois, Carillon and Grenville, St. Anne, Chambly, St. Ours, Rideau, Trent and St. Peter's are also shown.

CONSTRUCTION.

SOULANGES CANAL.

This canal extends from Coteau Landing to Cascades, a distance of 14 miles.

The works of construction of this canal are completed.

Total expenditure up to June 30, 1906	$6,891,174 70
Expended during the year ended March 31, 1907	13,508 88
Total expended up to March 31, 1907	$6,904,683 58

There yet remain some further payments to be made.

SAULT STE. MARIE CANAL.

This canal is cut through St. Mary's island; it is 1½ miles in length. The depth of water on the mitre sill at low water is 20 feet 4 inches, 22 feet in the prism, 21 feet 5 inches in the lower entrance, with a minimum width of 315 feet. In the upper entrance there is only a depth of 18 feet of water at low water, but the work of deepening to 21 feet 5 inches is in progress. A contract was entered into with Mr. Boone to continue the work of deepening and widening, which, when completed, will give safe passage for vessels approaching and departing from the canal.

It having been found necessary to lengthen the entrance piers at each end of the canal, a contract has been entered into with Mr. Birmingham to extend south lower entrance pier 800 feet. The work is completed. For the extension of 800 feet to the south upper entrance pier, a contract has been entered into with O'Boyle Bros., which is completed. An addition of 40 feet is being built to south entrance pier. When this work is brought to a finish the construction of the canal may be considered complete, unless, with a view to appearance of neatness and beauty, it is considered desirable to level up the grounds, lay them out in parterres, and plant them with trees and shrubs.

Total expenditure up to June 30, 1906	$4,543,675 99
Expended from June 30, 1906, to March 31, 1907	95,504 63
Total expended up to March 31, 1907	$4,639,180 62

TRENT CANAL.

This canal is designed to extend from the waters of Lake Ontario to the Georgian bay on Lake Huron, at the mouth of the Severn river, the total distance being about 200 miles, of which 20 miles are canal and about 180 miles river and lake navigation.

Sections 1 and 2, on the Peterborough-Lakefield division, 9·61 miles, which were constructed by Messrs. Brown, Love & Aylmer and Messrs. Corry & Laverdure respectively, were opened for traffic on July 9, 1904, on which date the hydraulic lift-lock at Peterborough was formally put in operation. The lift-lock has a lift of 65 feet. It was fully described in the report of 1904.

The contract for the steel for this hydraulic lift-lock was awarded to the Dominion Bridge Company of Montreal, on February 15, 1905, and the work under this contract is completed.

Balsam-Simcoe Lake Division.

For section No. 1 Mr. Andrew Onderdonk was the contractor. He completed his contract some time ago, but as it is only a section of this division, it is only occasionally used, and has not been formally opened for public traffic. It is about six miles in length.

Section No. 2 is completed.

Section No. 3.—The contract for this section was awarded to Messrs. Brown & Aylmer on September 6, 1900. The work consists of constructing five concrete locks, three dams, three swing bridges, the necessary excavation, culverts, &c., and is completed.

To complete this canal, which is designed to extend from the Georgian bay to the waters or Lake Ontario, there remain to be placed under contract the section from Lake Simcoe to Georgian bay and the work between Heeley's falls and Lake Ontario waters.

Holland River Division.

Section No. 1.—A contract for this section was entered into with the Lake Simcoe Dredging Company on April 30, 1906.

Section No. 2.—From Holland Landing to Newmarket, a contract has been made with Mr. J. Riley of St. Catharines for this section.

The following is a statement of the expenditure made on the construction of this canal from its commencement up to March 31, 1907.

Expended prior to June 30, 1867..	$ 309,371 31
Expended subsequent to June 30, 1867, and up to June 30, 1894 (date of works contracted for)....	782,584 88
Expended from June 30, 1894, to June 30, 1904.. ..	3,512,435 81
Total expenditure up to June 30, 1905..	4,957,653 75
Expended from June 30, 1905, to June 30, 1906.. ..	319,789 49
Total expenditure up to June 30, 1906..	$5,277,443 24
Expended from June 30, 1906, to March 31, 1907.. ..	153,045 42
Total expenditure to March 31, 1907..	$5,430,488 66

ENLARGEMENT.

LACHINE CANAL.

This canal extends from Montreal to Lachine, a distance of 8½ miles. There are 5 lift locks, 270 x 45 feet, with 14 feet water on the mitre sills, giving a total rise of 45 feet. There was a large amount of work performed in the way of repairs and renewals during the year. There were new plans prepared during the year providing for the rebuilding of part of the slope walls in concrete. Messrs. Quinlan & Robertson secured the contract and the work was pushed vigorously as soon as the canal was unwatered. The work of dredging the basin, &c., was continued during the year. The total quantity of material excavated was about 8,000 cubic yards. Work on the installation of the electric machinery for the operation of lock gates, &c., was continued during the year.

The total expenditure for original construction from 1843 to 1848		$2,587,532 85
Expenditure in 1869		2,000
Total expenditure up to June 30, 1869		$2,589,532 85
Total expenditure for enlargement up to June 30, 1905	$8,885,578 80	
Expended in year ended June 30, 1906	103,798 28	
Total expenditure to June 30, 1906	$8,989,377 08	
Expended from June 30, 1906, to March 31, 1907	18,840 85	
Total expenditure for enlargement to March 31, 1907		9,008,217 93
Total expenditure for construction and enlargement to March 31, 1907		$11,597,750 78

CORNWALL CANAL.

This canal extends from Cornwall to Dickenson's Landing, a distance of 11 miles. No special work during the year.

FARRAN'S POINT CANAL.

This canal commences at Farran's Point and extends a mile westward.

The work of enlargement on this canal is completed.

The total expenditure for construction and enlargement up to June 30, 1906, is	$877,090 57
Expended during year ended March 31, 1907	Nil
Total expenditure up to March 31, 1907	$877,090 57

RAPIDE PLAT CANAL.

This canal extends from Morrisburg west ward for a distance of 3⅞ miles.

A power plant is being constructed at the lock in the village of Morrisurg for manufacturing and lighting purposes.

The work of enlargement was completed on January 14, 1905.

Total expenditure up to June 30, 1906	$2,157,487 09
Expended during the year ended March 31, 1907	Nil
Total expenditure up to March 31, 1907	$2,157,487 09

GALOPS CANAL.

The works of enlargement of both the Iroquois section and the Cardinal section of this canal are completed, and the engineers are preparing the final estimates, the details of which, in order to meet the requirements of the Auditor General's office, are very voluminous.

The work on the upper entrance section, for which Messrs. Murray & Cleveland are the contractors, is drawing to a close, and will, it is confidently expected, be completed during the current year. A wharf was built at Cardinal.

Total expenditure on enlargement up to June 30, 1906	$5,960,844 40
Expended from June 30, 1906, to March 31, 1907	45,000 00
Total expenditure up to March 31, 1907	$6,005,844 40

WELLAND CANAL.

The trunk line extends from Port Dalhousie on Lake Ontario to Port Colborne on Lake Erie, a distance of 26¾ miles.

IMPROVEMENTS AT PORT COLBORNE.

Messrs. Hogan & McDonell are the contractors for this work. The condition of the works may be described as follows :—

The contractors have made some progress with the excavation in the new harbour. Mr. M. J. Hogan, under his contract for 'New Docking along West Pier,' has made very good progress; nearly all of the cribs being in place and a large portion of the concrete superstructure.

The foundations for the proposed elevator on Dock No. 2, under contract to Messrs. Larkin & Sangster, has been completed, and the filling around the piers has been put in place by Messrs Hogan & McDonell.

The contract was let to P. Lyall & Sons to build an 800,000 bushel elevator work is under way.

Total expenditure up to June 30, 1906	$1,207,959 10
Expended from June 30, 1904, to March 31, 1907	287,586 16
Total expenditure up to March 31, 1907	$1,495,545 26

REMOVAL OF OBSTRUCTIONS AND IMPROVEMENTS.

The obstructions referred to are the pivot piers of the bridges in the centre of the canal. It is proposed each year, to tear down two or three of the old bridges and build new structures spanning the entire channel, until all the bridges have been rebuilt.

Six of these bridges have been replaced with modern structures, giving a clear channel 100 feet in width.

Other improvements of various kinds have been caried out.

Total expenditure up to June 30, 1906	$ 656,464 21
Expended from June 30, 1906, to March 31, 1907	Nil.
Total expenditure up to March 31, 1907	$ 656,464 21

DEEPENING PORTIONS OF LONG LEVEL.

This work is being executed by Magann & Phinn.

This deepening will give 17 feet at normal level and 15 feet at extreme low water; the work is nearing completion.

Total expenditure up to June 30, 1906	$ 492,288 76
Expended from June 30, 1906, to March 31, 1907	61,516 73
Total expenditure up to March 31, 1907	553,805 49

	Construction.	Enlargement.
Total expenditure up to June 30, 1906	$7,693,824 03	$19,101,740 34
Expended from June 30, 1906, to March 31, 1907		480,305 03
Total expenditure up to March 31, 1907		$19,582,045 37

ST. LAWRENCE RIVER AND LAKE IMPROVEMENTS.

GALOPS RAPIDS CHANNEL.

This work is being executed by the contractors, the Gilbert Blasting and Dredging Company.

Total expenditure up to June 30, 1906	$ 986,132 81
Expended from June 30, 1906, to March 31, 1907	13,350 00
Total expenditure up to March 31, 1907	$ 999,482 81

NORTH CHANNEL.

This channel is about 2¾ miles in length, 300 feet wide, with 16 feet of water at low water.

It commences about one mile west of the upper entrance to the Galops canal, and runs in a direct line to deep water off Chimney Point.

The work also comprises the building of dam from Adam's island to Galops (Ogden) island. These works are being executed by the contractor, Mr. M. A. Cleveland, and it is expected that they will all be completed this season, 1906.

Total expenditure up to June 30, 1906	$1,539,590 72
Expended from June 30, 1906, to March 31, 1907	61,528 34
Total expenditure up to March 31, 1907	$1,601,119 06

ST. LAWRENCE RIVER AND CANALS.

REDUCING SHOALS WEST OF CORNWALL CANAL.

The contemplated improvement of the river channel west of the upper entrance of the Cornwall canal has been completed by the removal of the following five shoals:—

Wagner's Island shoal.

Dawson's Point.

Archibald's Point.

Markell's Point.

Maxwell's shoal.

The removal of these shoals to a depth of 17½ feet of water, has materially improved the channel. It has changed the direction of the current, which, instead of flowing in the direction of the Long Sault as heretofore, has taken a direct course towards the entrance of the canal, a deviation which greatly advantages the navigation of the channel.

Total expenditure on river reaches to June 30, 1906	$ 491,266 05
Expenditure June 30, 1906, to March 31, 1907	5,218 03
Total expenditure to March 31, 1907	$ 496,484 08

SUMMARY.

To summarize, I may state the cost of construction and enlargement of the canals and improvements to the river and lakes up to March 31, 1907, to be as follows, viz.:—

Route from Montreal to Port Arthur.

—	Original Construction of Canals.	Enlargement of Canals.	Improvement to St. Lawrence River and Lakes.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.
Lachine Canal	2,589,532 85	9,008,217 89	.....	11,597,750 74
Lake St. Louis	.....	.....	298,176 11	298,176 11
Soulanges Canal	6,904,673 58	.....	.....	6,904,673 58
Lake St. Francis	.....	.....	75,906 71	75,906 71
Cornwall Canal	1,945,624 73	5,271,224 12	.....	7,216,848 85
Williamsburg Canal	1,320,655 54	10,676 26		
Farran's Point Canal	.....	877,090 57		
Rapide Plat Canal	.....	2,158,242 00	....	10,373,291 29
Galops Canal	.....	6,006,626 92		
Galops Rapids	.....	.....	999,482 81	999,482 81
River Reaches	.....	.....	718,674 78	718,674 78
North Channel	.....	.....	1,601,118 61	1,601,118 61
Murray Canal	1,248,820 26	.....	.....	1,248,820 26
Welland Canal	7,693,824 03	19,582,045 37	.....	27,275,869 40
Sault Ste. Marie Canal	4,639,180 62	.....	.....	4,639,180 62
Total	26,342,311 61	42,914,123 13	3,693,359 02	72,949,793 76

If to the above total there is added the cost of the Beauharnois canal—$1,636,690.26, not now required for navigation—the total expenditure is $74,586,484.02.

Route from Lachine to Ottawa.

—	Original Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
St. Anne's Lock	134,456 51	1,035,759 12	1,170,215 63
Carillon and Grenville Canals	63,053 64	4,119,039 32	4,182,092 96
Total	197,510 15	5,154,798 44	5,352,308 59

Construction by the Imperial Government is not included. Records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

Route from Ottawa to Kingston.

—	Original Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
Rideau Canal	4,085,889 21	.....	4,085,889 21
Tay Canal	489,599 23	.....	489,599 23
Total	4,575,488 44	.....	8,575,488 44

Route from St. John, P.Q., to Sorel.

	Original Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
Chambly Canal	637,056 76	.....	67,056 76
St. Ours Lock	121,537 65	.....	121,537 65
Total	758,594 41	.....	758,594 41

Route from Lake Ontario to Georgian Bay.

	Original Construction.	Enlargement.	Total.
	$ cts.	cts.	$ cts.
Trent Canal	5,409,524 26	.....	5,409,524 26
Total	5,409,542 26	.....	5,409,524 26

Route from Atlantic Ocean to Bras d'Or Lakes.

	Original Construction.	Enlargement.	Total.
	$ cts.	$ cts.	$ cts.
St. Peter's Canal—Cape Breton	248,762 84	399,784 30	648,547 14
Total	248,762 84	399,784 30	648,547 14

The Culbute canal has been abandoned and the Beauharnois canal is no longer required for navigation purposes, but has to be maintained as a power canal.

The construction of these two canals cost :—

Culbute canal	$ 382,776 46
Beauharnois canal	1,636 690 26
Total	$2,019,466 72

MAINTENANCE AND OPERATION.

LACHINE CANAL.

Operation.

An interruption occurred to the traffic through this canal during the season of 1906 of 56 hours.

Maintenance.

A very large amount of work was performed towards maintaining the canal in good order during the year.

The cost of repairs made during the year ended March 31, 1907, is as follows:—

Ordinary repairs under head of staff and repairs		$ 47,465 20
Special repairs under head of income—		
Grading and finishing lock No. 2	$ 6,998 18	
Wall at Warehousing Co.'s basin No. 2	20,717 03	
Widening wharf, basin No. 1	20,462 30	
Locks Nos. 1 and 2	5,000 00	
Repairs to lock No. 1	12,694 74	
		65,872 25
Total		$ 113,337 45

SOULANGES CANAL.

Operation.

The peration of this canal was conducted without interruption during the season of 1906. The cost of repairs made during the year ended March 31, 1907, is as follows :—

Ordinary repairs under head of staff and repairs		$ 15,604 71
Special repairs under head of income—		
General repairs		3,216 29
Total		$ 18,821 00

CORNWALL CANAL.

Operation.

No interruption occurred to the traffic through this canal during the season of 1906.

The canal is well lighted by electricity, and the lock gates, valves, weirs and bridges have continued to be operated most successfully by electrical power.

Maintenance.

The cost of repairs during the year ended March 31, 1907, is as follows :—

Ordinary repairs under the head of staff and repairs		$ 24,489 18
Special repairs under head of income—		
To build seow	$ 2,361 75	
To rebuild river wharf at foot of canal	17 70	
To put in rip-rap facing of stone around 'The Point' between the locks	1,084 00	
Repairs North Bank	728 16	
		4,191 61
Total		$ 28,689 79

WILLIAMSBURG CANAL.

Operation.

No interruption occurred in the traffic through these canals during the season of 1906.

Maintenance.

The cost of repairs during the year ended March 31, 1907, is as follows:—

Ordinary repairs under the head of staff and repairs....		$8,501 57
To stop leak in bank.....	$18,000 00	
To rebuild retaining walls.....	405 65	
		18,405 65
Total.....		$26,907 22

WELLAND CANAL.

Operation.

The removal of the pivot piers from the centre of the canal, which is being done by degrees, is a great benefit to navigation, and is much appreciated by the transportation companies using the canal. Navigation was interrupted for 42 hours.

Maintenance.

The cost of repairs during the year ended March 31, 1907, is as follows:—

Ordinary repairs under the head of staffs and repairs..		$53,247 50
Special repairs under head of income—		
Stone protection to banks of canal.....	$19,961 38	
Renew abutment, Chippawa and O'Neil's bridges.....	11,999 57	
To build retaining wall in rock cut.....	12,107 60	
To renew foundations of weir at lock No. 2, old canal.....	4,604 93	
To renew entrance piers at Port Maitland.	7,362 99	
		66,036 47
		$109,283 97

SAULT STE MARIE CANAL.

Operation.

No interruption to navigation occurred in this canal during the season.

During the season of 1906, there were 4,152 lockages, passing 5,913 registered and unregistered vessels and scows, with a total tonnage of 6,359,176 tons; of this total tonnage 1,959,186 tons was of Canadian vessels, being an increase in this class of tonnage of 159,850.

Maintenance.

The cost of repairs during the year ended March 31, 1907, is as follows:—

Ordinary repairs under the head of staff and repairs		$11,520 53

CHAMBLY CANAL.

The operation of this canal was conducted without interruption during the season of 1906.

Maintenance.

The cost of repairs during the year ended March 31, 1907, is as follows:—

Ordinary repairs under head of staff and repairs		$22,418 88
Special repairs under head of income—		
House for bridge-keeper	$2,199 57	
To strengthen banks	6,724 25	
To macadamize road west side of canal	1,493 91	
To macadamize tow-path	9,996 67	
Culvert at Denault's farm	1,539 40	
		21,953 80
		$44,372 68

ST. OURS LOCK.

Operation.

There was no interruption to navigation on this canal during the season of 1906.

Maintenance.

The cost of repairs during the year ended March 31, 1907, was as follows:—

Ordinary repairs under the head of staff and repairs		$1,142 79
Special repairs under head of income—		
New boom piers and booms	$4,200 00	
		4,200 00
Total		$5,342 79

STE. ANNE'S LOCK.

Operation.

There was no interruption to navigation on this lock during the season of 1906.

Maintenance.

The cost of repairs during the year ended March 31, 1907, is as follows:—

Ordinary repairs under the head of staff and repairs		$901 47
Rebuilding piers, north side entrance	$2,449 96	
		2,449 96
Total		$3,331 43

CARILLON AND GRENVILLE CANALS.

Operation.

There was no interruption to navigation on these canals during the season of 1906.

Maintenance.

The cost of repairs during the year ended March 31, 1907, as follows:—

Ordinary repairs under the head of staff and repairs		$ 7,036 40
Special repairs under head of income—		
Dams across slides	$1,213 70	
To build swing bridge	2,225 00	
Rebuilding Grenville wharf	5,954 68	
		9,392 70
Total		$ 16,429 10

BEAUHARNOIS CANAL.

Operation.

This canal is only being used by a few market boats and barges. The staff has been reduced to one man at each lock and isolated bridge, and three men in charge of ferries.

Maintenance.

The cost of repairs during the year ended March 31, 1907, is as follows :—

Ordinary repairs under head of staff and repairs	$ 11,711 09
Special repairs under head of income—	
Regulating pier opposite parish of St. Stanislas	598 64
	$ 12,309 73

MURRAY CANAL.

Operation.

There was no interruption to navigation on this canal during the season of 1906.

Maintenance.

The cost of repairs during the year ended March 31, 1907, is as follows:—

Ordinary repairs under the head of staff and repairs		$ 1,710 55
Special repairs under head of income—		
To rebuild piers with concrete, east end	$ 10,423	
		$ 12,133 55

RIDEAU CANAL.

Operation.

There was an interruption to navigation on this canal during the season of 1906 of six days.

Maintenance.

The cost of repairs during the year ended March 31, 1907, is as follows:—

Ordinary repairs under the head of staff and repairs		$ 44,627 82
Special repairs under head of income—		
To rebuild three swing bridges	$3,483 97	
To purchase new tug	7,500 00	
Land damages	22 10	
		11,006 07
Total		$ 55,633 89

TRENT CANAL.

Operation.

There was no interruption to navigation on this canal during the season of 1906.

Maintenance.

The cost of repairs during the year ended March 1907, is as follows:—

Ordinary repairs under the head of staff and repairs		$ 36,516 47
Specian repairs under the head of income—		
TRENT—		
Improvements	$30,462 10	
		30,462 10
Total		$ 66,978 57

ST. PETER'S CANAL.

Operation.

There was no interruption to navigation on this canal during the season of 1906.

Maintenance.

The cost of repairs during the year ended March 31, 1907, as follows :—

Ordinary repairs under the head of staff and repairs . .$ 246 87

CULBUTE CANAL.

This canal has been abandoned for navigation purposes.

SUMMARY.

Cost of maintenance and operation of the canal system for the year ended March 31, 1907	$947,222 66
Net revenue of canals after deducting refunds	105,003 15
Excess of cost of maintenance and operation over revenue	$842,219 51

TABLE showing the dates of closing of the canals for the season of 1906-07.

Name of Canal.	Navigation opened 1907.	Navigation closed 1906.
Lachine		December 4
Soulanges		" 4
Cornwall		" 6
Farran's Point		" 6
Rapide Plat		" 6
Galops		" 6
Murray		" 6
Welland		" 17
Sault Ste. Marie		" 22
Grenville		November 30
Carillon		" 30
Ste. Anne's		" 30
Chambly		" 30
St. Ours		" 28
Rideau { At Ottawa		" 27
Rideau { At Kingston		" 27
Trent		December 1
Beauharnois		November 30
St. Peter's		January 15

NOTE.—The fiscal year 1906-7, closing March 31, the dates of opening of navigation will, for 1907, be inserted in statement for fiscal year 1907-8.

CANAL STATISTICS.

These statistics are for the season of 1906; they have, as usual, been prepared by Mr. R. Devlin, the officer in charge of the canal statistics office.

TABLE showing the tons of freight passing through each canal, the number of trips of vessels passing through each canal for the season ended December, 1906.

Name of Canal.	Tons of Freight passed through.	Tolls heretofore charged, now free.	No. of Trips of Vessels passing through.
		$ cts.	
Welland	1,201,967	163,031 93	1,536
St. Lawrence	1,636,117	124,832 54	9,471
Chambly	498,939	30,189 18	3,089
Ottawa	397,415	30,729 20	2,207
Rideau	82,159	6,824 91	5,867
St. Peter's	76,327	2,658 70	1,418
Trent	28,495	1,123 57	1,987
Murray	27,727	1,283 02	761
Sault Ste. Marie	6,574,039	No tolls.	5,689

GENERAL REMARKS.

For details as regards the subjects treated in this report, I refer you to the reports of the officers in charge of the government railways and canals, which form appendices hereto.

RAILWAY SUBSIDIES.

The subsidies voted for railways, as stated in previous annual reports, are in such a form that it is not possible to show the amount of cash subsidy granted, as the amount of subsidy will, in many cases, be based upon the cost of each road. For this reason it is not possible to give the amount of each subsidy available; but, the amount paid will be shown in the statements in Parts 1 and 2, also the number of miles of railway for which subsidy is granted per mile, which was available, and the number of miles of railway built up to March 31, 1907, for which cash subsidy per mile was granted. There will also be found the amount of subsidy per annum paid up to March 31, 1907, with the number of miles built.

CANAL STATISTICS.

These statistics are for the season of 1906. They have been prepared by Mr. R. Devlin, the officer in charge of the canal statistics.

COMPARATIVE Statement, for seasons of 1905 and 1906, showing the amounts that would have been collected had not the canals been made free.

Name of Canal.	Season of 1905.	Season of 1906.
	$ cts.	$ cts.
Welland Canal	157,478 61	163,031 93
St. Lawrence Canals	128,610 73	124,832 54
Chambly Canal	28,391 88	30,189 18
Ottawa Canal	28,949 43	30,729 20
Rideau Canal	5,589 43	6,824 91
St. Peter's Canal	2,911 96	2,658 70
Trent Canal	1,309 13	1,123 57
Murray Canal	1,205 89	1,283 02
Sault Ste. Marie Canal	No tolls.	No tolls.
Total	354,447 06	360,673 05

COMPARATIVE Statement of Tons of freight which passed through the canals in seasons of 1905 and 1906.

Name of Canal.	Season of 1905.	Season of 1906.	Number of trips of vessels passing through.	
			Season of 1905.	Season of 1906.
Welland Canal	1,092,050	1,201,967	1,595	1,536
St. Lawrence Canals	1,752,855	1,636,117	8,996	9,471
Chambly Canal	447,069	498,939	3,343	3,890
Ottawa Canal	390,771	397,415	2,152	2,207
Rideau Canal	59,864	82,159	4,715	5,867
St. Peter's Canal	81,077	76,327	1,595	1,418
Trent Canal	29,421	28,495	2,046	1,987
Murray Canal	45,231	27,727	707	761
Sault Ste. Marie Canal	5,473,406	6,574,039	5,662	5,680
Total	9,371,744	10,523,185	30,811	32,817

RAILWAYS

DISTANCES OF THROUGH RAILWAY ROUTES

FROM THE

ATLANTIC TO THE PACIFIC

LENGTHS OF THE GOVERNMENT RAILWAYS.

CANALS

LENGTHS AND LOCATIONS OF THE DOMINION CANALS AND THE INTERMEDIATE WATERS.

WITH THE

DIMENSIONS OF LOCKS.

MAPS

MONTREAL, OR QUEBEC, TO PACIFIC OCEAN.

Montreal to Vancouver.

	Miles.
1. Canadian Pacific Railway to Vancouver	2,906
Canadian Pacific Railway from North Bay to Vancouver	2,546
2. Grand Trunk Railway to North Bay	560
Total	3,102

Quebec to Vancouver.

	Miles.
1. Canadian Pacific Railway to Vancouver	3,052
2. Intercolonial Railway to Montreal	162
Canadian Pacific Railway from Montreal to Vancouver	2,906
Total	3,068
3. Grand Trunk Railway to Montreal	172
Canadian Pacific Railway from Montreal to Vancouver	2,906
Total	3,078
4. Grand Trunk Railway to North Bay	732
Canadian Pacific Railway from North Bay to Vancouver	2,542
Total	3,274

The Canadian Pacific Railway was opened for through traffic on June 28, 1886.

INTERCOLONIAL RAILWAY.

The Intercolonial Railway touches six Atlantic ocean ports, namely, Point du Chêne, Pictou, Halifax, St. John, Sydney and North Sydney, as well as the ports of Quebec and Montreal on the River St. Lawrence.

The total length of the road operated during the year ended March 31, 1906, was 1,445·05 miles, and for freight branches 12·50 miles, making a total of 1,457·42 miles.

The following are the through distances :—

	Miles.
Halifax to Montreal, via Lévis	837
St. John to Montreal, via Lévis	740
Sydney to Montreal, via Lévis	990
North Sydney to Montreal, via Lévis	983

Freight carried direct via St. Henri to Montreal, which would reduce each of the above distances by 3 miles.

WINDSOR BRANCH.

This road extends from Windsor Junction, on the Intercolonial Railway, to Windsor, a distance of 32 miles.

PRINCE EDWARD ISLAND RAIWAY.

LENGTH OF LINE.

	Miles.
Souris to Tignish	166
Mount Stewart to Georgetown	24
Charlottetown to Royalty Junction	5
Emerald Junction to Cape Traverse	13
Alberton to Caseumpee wharf	1
Charlottetown to Murray Harbour	52·3
Montague Junction to Montague	6·2
	267·5

Communication between the Prince Edward Island Railway and the Intercolonial Railway is afforded in summer by steamer between Summerside and Point du Chene, between Charlottetown and Pictou and between Georgetown and Pictou, and in winter by specially built steamers between Georgetown and Pictou and between Charlottetown and Pictou. There is also further provision made for communication by ice boats between Cape Traverse on Prince Edward Island and Cape Tormentine on the mainland, a distance of about 9 miles, at which latter place connection is made with the New Brunswick and Prince Edward Island Railway, about 40 miles in length, connecting with the Intercolonial Railway at Sackville. This winter service across the Straits of Northumberland is efficiently worked by the Marine and Fisheries Department.

CANALS.

The following statements give in concise form the essential features of the government canal works and the intermediate water navigation:—

The canal systems of the Dominion, under government control in connection with lakes and navigable rivers, are as follows:—

First.—The through route between Montreal and the head of Lake Superior (14 feet minimum depth of water.)

	Miles.
1. Lachine Canal	8½
Lake St. Louis and River St. Lawrence	16
2. Soulanges Canal	14
Lake St. Francis and River St. Lawrence	33
3. Cornwall Canal	11
River St. Lawrence	5
4. Farran's Point Canal	1
River St. Lawrence	10
5. Rapide Plat Canal	3½
River St. Lawrence	4
6. Galops Canal	7¼
River St. Lawrence and Lake Ontario	236
7. Welland Canal	26¾
Lake Erie, Detroit River, Lake St. Clair, Lake Huron, &c.	580
8. Sault Ste. Marie Canal	1¼
Lake Superior to Port Arthur	266
Total	1,223¼
To Duluth	1,357
Chicago	1,286

Second.—Ottawa to Lake Champlain.

1. Grenville. 2. Carillon. 3. St. Anne's. 4. Chambly. 5. St. Ours Canals.

Third.—Ottawa to Kingston and Perth.

1. Rideau Canal.

Fourth.—Lake Ontario at Trenton to Lake Huron at mouth of River Severn.

1. Trent Canal (not completed).

Fifth.—Ocean to the Bras d'Or Lakes.

1. St. Peter's Canal.

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence, with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle Isle to Port Arthur, at the head of Lake Superior, a distance of 2,200 statute miles. The distance to Duluth is 2,343 miles. The distance to Chicago, 2,272 miles.

From the Straits of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 986 miles. From Quebec to Montreal the distance is 160 miles. Owing to the shallowness of the waters on a portion of the river between these two places, particularly through Lake St. Peter, vessels drawing more than from ten to twelve feet were formerly barred from passage for the greater part of the season of navigation. In 1826 the question of deepening the channel was first definitely mooted, but it was not until 1844 that any dredging operations were begun. In that year, the deepening of a new straight channel was commenced, but the scheme was abandoned in 1847. In 1851 the deepening of the present channel was begun. At that time the depth of the channel at low water was 10 feet 6 inches. By the year 1869 this depth had been increased to 20 feet, by 1882 to 25 feet, and by the close of 1888 the depth of 27½ feet, at low water, was attained for a distance of 108 miles from Montreal to a point within tidal influence. This work is now being continued by the government of Canada, which in 1888, under the provisions of the Act 51 Vic., ch. 5 of that year, assumed the indebtedness. The channel has a minimum width of 300 feet, extending to 550 feet at points of curvature. The channel is lighted and buoyed.

Navigation, which is closed by ice during the winter months, opens about the end of April.

Montreal has by this work been placed at the head of ocean navigation, and here the canal systems of the River St. Lawrence begin, overcoming the various rapids by which the river channel upwards is obstructed, and giving access through the St. Lawrence canals, the Welland canal, the great lakes and the Sault Ste. Marie canal, to the head of Lake Superior.

The difference in level between the point on the St. Lawrence, near Three Rivers, where tidal influence ceases, and Lake Superior, is about 600 feet.

The Dominion canals, constructed between Montreal and Lake Superior, are the Lachine, Soulanges, Cornwall, Farran's Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 73 miles; total lockage (or height directly overcome by locks), 551 feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior, is 48. The Soulanges canal takes the place of the Beauharnois canal; the latter may be abandoned for navigation purposes.

Communication between Lakes Huron and Superior is obtained by means of the Canadian Sault Ste. Marie canal, and also by the St. Mary's Falls canal, situated on the United States side of the River St. Mary. Both these canals are free of toll.

The improvement of the United States channels in St. Mary's river has been continued from year to year, so that the dredged areas now total 34 miles in length, with a minimum width of 300 feet, which is increased at angles and other critical points to 1,000 feet. The depth is 20 feet at the mean stage of water. Excavation has now been commenced to afford 21 feet at the lowest stage of water.

It is important to note that the enlargement of canals on the main route between Montreal and Lake Erie comprises locks of the following minimum dimensions: Length, 270 feet; width, 45 feet; depth of water on sills, 14 feet. The length of the vessels to be accommodated is limited to 255 feet. At Farran's, in the canal of that name, the lock is 800 feet long. A similar lock is built at Iroquois on the Galops canal, the object being to pass a full tow at one lockage.

LACHINE CANAL.

Length of canal	8½ statute miles.
Number of locks	5
Dimension of locks	270 feet by 45 feet.
Total rise or lockage	45 feet.
Depth of water on sills, at two locks	18 "
Depth of water on sills, at three locks	14 "
Average width of new canal	150 "

The old lift locks, 200 feet by 45 feet, are still available, with 9 feet of water on mitre sills.

The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two lock entrances at each end.

The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis rapids, the first of the series of rapids which bar the ascent of the River St. Lawrence. They are 986 miles distant from the Straits of Belle Isle.

SOULANGES CANAL.

Length of canal	14 statute miles.
Number of locks—	
Lift	4
Guard	1
Dimensions of locks	280 feet by 45 feet.
Total rise or lockage	84 feet.
Depth of water on sills	15 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	164 "
Number of arc lights	219 of 2,000 c.p. each.

The canal extends from Cascade Point to Coteau Landing, overcoming the Cascade Rapids, Cedar Rapids and Coteau Rapids.

From the head of the Lachine to the foot of the Soulanges the distance is sixteen miles.

CORNWALL CANAL.

Length of canal	11	statute miles.
Number of locks	6	
Dimension of locks	270	feet by 45 feet.
Total rise or lockage	48	feet.
Depth of water on sills	14	"
Breadth of canal at bottom	100	"
Breadth of canal at water surface	164	"
Number of arc lights	350	

The old lift locks, 200 feet by 45 feet, are also available, with nine feet of water on mitre sills.

From the head of the Soulanges to the foot of the Cornwall canal there is a stretch through Lake St. Francis 38¾ miles which is being made navigable for vessels drawing fourteen feet.

The Cornwall canal extends past the Long Sault Rapids from the town of Cornwall to Dickenson's Landing.

WILLIAMSBURG CANALS.

The Farran's Point, Rapide Plat and Galops canals are collectively known as the Williamsburg canals.

FARRAN'S POINT CANAL.

Length of canal	1	mile.
Number of locks	1	
New lock	800	feet by 45 feet.
Old lock	200	"
Total rise or lockage	3½	feet.
Depth of water on sills of new lock	9	"
Depth of water on sills of old lock	14	"
Breadth of canal at bottom	90	"
Breadth of canal at water surface	154	"

From the head of the Cornwall canal to the foot of Farran's Point canal, the distance on the River St. Lawrence is five miles. The latter canal enables vessels ascending the river to avoid Farran's Point rapid, passing the full tow at one lockage. Descending vessels run the rapids with ease and safety.

RAPIDE PLAT CANAL.

Length of canal	3⅔	miles.
Number of locks	2	
Dimensions of locks	270	feet by 45 feet.
Total rise or lockage	11½	feet.
Depth of water on sills	14	"
Breadth of canal at bottom	80	"
Breadth of canal at surface water	152	"

The old lift-lock, 200 feet by 45, is also available, with nine feet of water on mitre sills.

From the head of Farran's Point canal to the foot of Rapide Plat canal, there is a navigable stretch of 10½ miles. The canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

GALOPS CANAL.

Length of canal	7⅞ miles.
Number of locks	3
Dimension of locks, one of which is a guard-lock	1-800 by 45. 2-270 by 45.
Total rise or lockage	15½ feet.
Depth of water on sills	14 "
Breadth of canal at bottom	80 "
Breadth of canal at surface of water	144 "

From the head of Rapide Plat canal to Iroquois, at the foot of the Galops canal, the St. Lawrence is navigable 4½ miles. The canal enables vessels to over come the rapids at Pointe aux Iroquois, Port Cardinal and the Galops.

MURRAY CANAL.

Length between eastern and western pier heads	5⅛ miles.
Breadth at bottom	80 feet.
Breadth at water surface	120 "
Depth below lowest known lake level	11 "

No locks.

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of Quinte and Lake Ontario, and thus enabling vessels to avoid the open lake navigation.

WELLAND CANAL.

Main line from Port Dalhousie, Lake Ontario, to Port Colborne, Lake Erie.

	Old Line.	Enlarged on New Line.
Length of canal	27½ miles.	26¾ miles
Pairs of guard-gates (formerly 3).		2
Number of locks. guard	26	25
Number of locks. lift	1	1
Dimensions	1 (tidal) 230 x 45 1 lock 200 x 45 1 lock 200 x 45 24 locks 150 x 45	270 feet x 45 feet.
Total rise or lockage	326¾ feet.	326¾ feet.
Depth of water on sills	10¼ "	14 "

WELLAND RIVER BRANCHES.

Length of canal—	
Port Robinson Cut to River Welland	2,622 feet.
From the canal at Welland to the river, via lock at Aqueduct	300 feet.
Chippewa Cut to River Niagara	1,020 feet.
Number of locks—one at Aqueduct and one at Port Robinson	2
Dimensions of locks	150 by 26½ feet.
Total lockage from the canal at Welland down to River Welland	10 feet.
Depth of water on sills	9 feet 10 inches.

GRAND RIVER FEEDER.

Length of canal	21 miles.
Number of locks	2
Dimensions of locks	1 of 150 by 26½ feet. 1 of 200 by 45 feet.
Total rise or lockage	7 to 8 feet.
Depth of water on sills	9 feet.

PORT MAITLAND BRANCH.

Length of canal	1¾ miles.
Number of locks	1
Dimensions of locks	185 feet by 45 feet.
Depth of water sills	7½ feet.
Total rise of lockage	11 feet.

The Welland canal has two entrances from Lake Ontario, at Port Dalhousie, one for the old, the other for the new canal.

From Port Dalhousie to Allanburg, 11¾ miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburg to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

From the head of the Welland canal there is a deep water navigation through Lake Erie, the Detroit river, Lake St. Clair, the St. Clair river, Lake Huron and River St. Mary to the Sault canal, a distance of about 580 miles. From the Sault the distance through Lake Superior to Port Arthur is 266 miles, and to Duluth 400 miles.

SAULT STE. MARIE CANAL.

Length of Canal, between the extreme ends of the entrance piers	5,967 feet.
Number of locks	1
Dimensions of locks	900 feet by 60 feet.
Depth of water on sills (at lowest known water level)	20 feet 3 inches.
Total rise or lockage	18 feet.
Breadth of canal at bottom	141 feet 8 inches.
Breadth of surface of water	150 feet.

This canal has been constructed through St. Mary's Island, on the north side of the rapids of the River St. Mary, and, with that river, gives communication on Canadian territory between Lakes Huron and Superior.

MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine canal, the navigation section of the lower River Ottawa, and the Ottawa canals, to the city of Ottawa; thence by the River Rideau and the Rideau canal to Kingston, on Lake Ontario—a total distance of 245$\frac{5}{8}$ miles.

After leaving the Lachine canal the works constructed to overcome difficulties of navigation are:—

Ottawa River Canals.

The Ste. Anne's Lock.	Grenville Canal.
Carillon Canal.	Rideau Canal.

The total lockage (not including that of the Lachine canal) is 509 feet—(345 rise, 164 fall)—and the number of locks is 55.

The following table exhibits the intermediate distances from Montreal harbour:—

Sections of Navigation.	Intermediate Distance.	Total Distance from Montreal.
	Miles.	Miles.
The Lachine canal	8$\frac{1}{2}$	
From Lachine to Ste. Anne's lock	15	23
Ste. Anne's lock and piers	$\frac{1}{8}$	23
Ste. Anne's lock and Carillon canal	27	50
The Carillon canal	$\frac{3}{4}$	51
From Carillon to Grenville canal	6$\frac{1}{4}$	57
The Grenville canal	$\frac{3}{4}$	63
From the Grenville canal to entrance of Rideau navigation	56	119
Rideau navigation ending at Kingston	126$\frac{1}{4}$	245

STE. ANNE'S LOCK.

	New Lock.	*Old Lock.*
Length of canal	¼ mile.	¼ mile.
Number of locks	1	1
Dimensions of locks	200 x 45 feet.	190 x 45 feet.
Total rise or lockage	3 feet.	3 feet.
Depth of sills	9 "	6 "

This work, with guide piers above and below, surmounts the Ste. Anne's rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the River Ottawa which forms the Lake of Two Mountains, 23½ miles from Montreal harbour.

THE CARILLON CANAL.

Length of canal	¾ mile.
Number of locks	2
Dimensions of locks	200 x 45 feet.
Total rise or lockage	16 feet.
Depth of water on sills	9 "
Breadth of canal at bottom	100 "
Breadth of canal at water surface	110 "

This canal overcomes the Carillon rapids.

From Ste. Anne's lock to the foot of the Carillon canal there is a navigable stretch of 27 miles, through the Lake of Two Mountains and the River Ottawa.

By the construction of the Carillon dam across the River Ottawa the water at that point is raised 9 feet, enabling the river above to be used for navigation.

GRENVILLE CANAL.

Length of canal	5¾ miles.
Number of locks	5
Dimensions of locks	200 x 45 feet.
Total rise or lockage	43¾ feet.
Depth of water on sills	9 "
Breadth of canal at bottom	40 to 50 feet.
Breadth of canal at surface of water	50 to 80 feet.

This canal, by which the Long Sault rapids are avoided, is about 56 miles below the city of Ottawa, up to which point the River Ottawa affords unimpeded navigation.

RIDEAU NAVIGATION.

The Rideau system connects the River Ottawa at the city of Ottawa, with the eastern end of Lake Ontario, at Kingston.

Length of navigation waters	126¼ miles.	
Number of locks going from Ottawa to Kingston	35 ascending.	14 descending.
Total lockage	446¼	282¼ rise and 164 fall at high water.
Dimensions of locks	134 x 33 feet	
Depth of water on sills	5 feet.	
Navigation depth through the several reaches	4½ "	
Breadth of canal reaches at bottom	60 feet in earth.	54 feet in rock.
Breadth of canal at surface of water	80 feet in earth.	
Length of canal	6 miles.	
Number of locks	2	
Dimensions of locks	134 feet x 32 feet.	
Total rise or lockage	26 "	
Depth of water on sills	5 " 6 inches.	
Length of dam	200 "	
Breadth of canal at bottom	40 "	
Breadth of canal at surface at water	40 " in rock.	60 " in clay.

The Perth branch of the Rideau canal affords communication between Beveridge's bay, on Lake Rideau, and the town of Perth.

The summit level of the Rideau system is at upper Lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the sources of supply :—

From the summit, the route towards Ottawa follows the Rideau river, and that towards Kingston follows the River Cataraqui. The supply of water for the canal is derived from the reserves given in detail below.

These may be divided into three systems, viz.:—

1. The summit level, supplied by the Wolf lake system.

2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau.

3. The southwest descending level to Kingston, supplied by the Mud lake system, formerly known as the Devil lake system, discharging into Lake Openicon.

Lake Openicon receives the waters of Bucke lake and Rock lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow to Cranberry lake, which, discharging through Round Tail outlet, forms the River Cataraqui. The river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu, through the St. Ours lock to the basin at Chambly; thence, by the Chambly canal, to St. Johns, and down the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain is entered, and connection is obtained with the River Hudson, by which the city of New York is directly reached. From the boundary line to New York the distance is 330 miles.

The following table shows the distances between Sorel and New York:—

Section of Navigation.	Intermediate Distance.	Total. Distances
	Miles.	Miles.
Sorel to St. Ours lock	14	14
St. Ours lock to Chambly canal	32	46
Chambly canal	12	58
Chambly canal to boundary line	23	81
Boundary line to Champlain canal	111	192
Champlain canal to junction with Erie canal	66	258
Erie canal from junction to Albany	7	265
Albany to New York	146	411

ST. OURS LOCK AND DAM.

Length	$\frac{1}{8}$ mile.
Number of locks	1
Dimensions of locks	200 feet by 45 feet.
Total rise or lockage	5 feet.
Depth of water on sills	7 feet at low water.
Length of dam in eastern channel	300 "
Length of dam in western channel	690 "

At St. Ours, 14 miles from Sorel, the River Richelieu is divided by a small island into two channels. The St. Ours lock is in the eastern channel.

There is a navigable depth in the Richelieu of 7 feet between St. Ours lock and Chambly basin, a distance of 32 miles.

CHAMBLY CANAL.

Length of canal	12	miles.	
Number of locks	9		
Dimensions of locks:—			
Guard lock No. 1 at St. Johns	122	feet.	From 22½ to 24 feet wide.
Lift lock, No. 2	124	"	
" 3, 4, 5, 6	118	"	
" 7, 8, 9 combined	125	"	
Total rise or lockage	74	"	
Depth of water on sills	7	"	
Breadth of canal at bottom	36	"	
Breadth of canal at surface of water	60	"	

This canal succeeds the 32 miles of navigable water between St. Ours lock and Chambly basin. The canal overcomes the rapids between Chambly and St. Johns.

TRENT CANAL.

The term 'Trent canal' is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in the present condition, are efficient only for local use. By various works this local use has been extended, and by others, now in progress and contemplation, this will become a through route between Lake Ontario and Lake Huron.

The series is composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the River Trent, on the Bay of Quinté, Lake Ontario, to Lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between Lake Huron and Lake Ontario was projected.

The course, as originally contemplated and modified, is as follows:—

Through the River Trent, Rice lake, the River Otonabee and Lakes Clear, Stony Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam, the summit water, about 165 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe; thence across Lake Simcoe to the Severn river; thence by the River Severn to Georgian bay, Lake Huron; the total distance being about 200 miles, of which only about 15 or 20 miles will be actual canal.

The full execution of the scheme, commenced by the Imperial government in 1837, was deferred. By certain works, however, below specified, sections of these waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and through Lake Scugog to Port Perry, a distance of 190 miles from Trenton.

The following table gives the distance of navigable and unnavigable reaches:—

	Navigable Miles.	Unnavigable Miles.
From Trenton, Bay of Quinté, to Nine Mile rapids	—	9
Nine Mile rapids to Percy landing	19½	—
Percy landing to Heeley's Falls dam	—	14½
Heeley's Falls dam to Peterborough	51¾	—
Peterborough to Lakefield	—	9½
Lakefield to a point across Balsam lake	61	—
Balsam lake to Lake Simcoe	—	18¾
Across Lake Simcoe to Severn river	18	—
Lake Simcoe to Georgian bay via Severn river	—	14
	150¼	65¾
Total distance, Bay of Quinté to Georgian bay		212
From Sturgeon Point on Sturgeon Lake, 48¾ miles from Lakefield, the branch through the town of Lindsay to Port Perry at the head of Lake Scugog		27

The works by which the Trent navigation has been improved comprise canals, with locks and bridges, at Young Point, Burleigh rapids, Lovesick, Buckhorn rapids, Bobcaygeon, Fenelon Falls and Rosedale; also dams at Lakefield, Young's Point, Burleigh Falls, Lovesick, Buckhorn, Bobcaygeon and Fenelon Falls. By these works there is afforded communication between Lakefield, 9½ miles from Peterborough, and Balsam lake, the headwaters of the system; opening up a total of about 10 miles of direct and lateral navigation.

At Lakefield, 9½ miles from Peterborough, the dam at the head of the Nine Mile rapids of the River Otonabee, maintains navigation on Lake Katchewannoe up to Young's Point.

At Young's Point, 5 miles from Lakefield, the dam between Lake Katchewannoe and Clear lake controls the water level through Clear and Stony lakes up to the foot of the Burleigh canal. The lock here, it should be observed, is controlled by the Provincial government.

At Burleigh Rapids, 10 miles from Young's Point, a canal, about 2¼ miles in length, passes the Burleigh and Lovesick rapids, and gives communication between Stony lake and Deer bay.

At Buckhorn rapids, 7 miles from Burleigh rapids, there is a canal about one-fourth of a mile long.

At Bobcaygeon, 15¾ miles from Buckhorn rapids, a dam, 553 feet long, controls the water level up to Fenelon Falls.

At Fenelon Falls, 15 miles from Bobcaygeon, a canal about one-third of a mile in length connects Sturgeon lake with Cameron lake.

The following is a list of the locks, with their dimensions:—

1	Lock at Rosedale,	100′ x 30′ x 4′ 6″	to 6′ 6″	depth water on mitre sill.
2	Locks at Fenelon,	134′ x 33′ x 5′ 0″	to 7′ 6″	depth of water on mitre sill.
1	" Lindsay,	134′ x 33′ x 5′ 0″	to 7′ 0″	" "
1	" Bobcaygeon,	134′ x 33′ x 5′ 8″	to 7′ 6″	" "
1	" Buckhorn,	134′ x 33′ x 5′ 0″	to 9′ 0″	" "
1	" Lovesick,	134′ x 33′ x 5′ 0″	to 9′ 4″	" "
2	" Burleigh,	134′ x 33′ x 6′ 0″	to 8′ 0″	" "
1	" Young's Point (a provincial government work) 134′ x 33′ x 5′ 0″ to 14′ 0″ depth of water on mitre sill.			
6	" Peterborough	134′ x 33′ x 5′ 0″	to 10′ 0″	depth of water on mitre sill.
1	" Little Lake—Lakefield.			
1	" Chisholm's,	134′ x 33′ x 5′ 0″	to 8′ 6″	" "
1	" Hastings,	134′ x 33′ x 7′ 0″	to 10′ 6″	" "
1	Hydraulic lift lock at Ashburnham.			
5	" Balsam Lake.			
1	" " Kirkfield.			
26				

ST. PETER'S CANAL, CAPE BRETON.

Length of canal	About 2,400 feet.
Breadth at water line	55 feet.
Lock	One tidal lock, 4 pairs of gates.
Dimensions	200 feet by 48 feet.
Depth of water on sills	18 feet at lowest water.
Depth through canal	19 feet.
Extreme rise and fall of tide in St. Peter's bay	4 feet.

This canal connects St. Peter's bay on the southern side of Cape Breton, Nova Scotia, with the Bras d'Or lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic.

BEAUHARNOIS CANAL.

Length of canal	12 statute miles.
Number of locks	9
Dimensions of locks	200 feet by 45 feet.
Total rise or lockage	82$\frac{1}{5}$ feet.
Depth of water on sills	9 "
Breadth of canal at bottom	80 "
Breadth of canal at water surface	120 "

As the new Soulanges canal is now opened for navigation the Beauharnois canal is practically abandoned for navigation purposes.

I have the honour to be, sir,
Your obedient servant,

M. J. BUTLER,
Deputy Minister and Chief Engineer of Railways and Canals.

The Honourable GEO. P. GRAHAM,
Minister of Railways and Canals.

INTERCOLONIAL RAILWAY OF CANADA,
OFFICE OF THE GENERAL MANAGER,
MONCTON, N.B., July, 1907.

SIR,—I have the honour to submit the following report on the working of the Intercolonial Railway during the fiscal period of nine months ended March 31, 1907.

I inclose the report of the Chief Engineer, on the works charged to capital account the report of the engineer of maintenance, on the repair and renewal of the permanent way, buildings and works, and the report of the superintendent of motive power and of the mechanical accountant, with the statements relating to the mechanical department; also the following statements of the accounts of the railway prepared by the Comptroller:—

1. Capital account.
2. Revenue.
3. Maintenance of way and structures.
4. Maintenance of equipment.
5. Conducting transportation.
6. General expenses.
7. Special votes.
8. General stores.
9. General balance.
10. Statement of averages.

The length of railway included in last year's report was 1,445·92 miles. To this is to be added the extension from North Sydney to Sydney Mines, 2·70 miles, making a total milege in operation during the period ended March 31, 1907, of 1,448·62 miles. Of the above total mileage, seventeen miles are double track.

CAPITAL ACCOUNT.

The cost of road and equipment on June 30, 1906, was $81,238,728 63

The additions during the year were as follows:—

To strengthen bridges	118,272 88
Original construction	573 66
Diversion of line at St. Leonard Junction	5,485 72
Diversion of line at Mitchell	3,986 86
Drummondville—Improvements at	3,681 01
Engine house, &c., Chaudière Junction	31,821 23
Engine house, machine shop, &c., Rivière du Loup	5,998 72
To increase accommodation at Ste. Flavie	16,914 78
Newcastle—Improvements at	2,760 96
Campbellton—Improvements at	5,529 85
Gibson—Air compressor and reservoir	1,780 91
To increase accommodation at Halifax	260,124 63
To dredge and blast rock at deep water terminus, Halifax	19,360 58
Increased accommodation at Truro	83,652 83
Increased accommodation at St. John	2,259 41
Increased accommodation at Springhill Junction	20 94

To increase accommodation at Sydney	17,612 69
Glengarry—Water tank and reservoir	1,585 78
Pictou Landing—Raising wharf	14,989 05
Increased accommodation at Stellarton	2,810 47
Increased accommodation at Antigonish	1,418 43
Air brakes to freight cars	21,000 00
Time recorders and watchmen's clocks	1,285 50
To increase accommodation at Pictou	74,638 18
Extension to Sydney Mines	22,195 85
Rolling stock	343,676 86
Double-tracking parts of line	50,751 82
Increased accommodation and facilities along the line	15,184 21
Additional sidings along the line Additional sidings and spur lines	32,433 72
Extension of wharf at Dalhousie	106 45
To provide side ladders on box cars	2,275 00
To exchange drawbars of freight cars	12,531 20
Improvements at Rothesay	47 16
Locomotive and car shops and land purchase at Moncton	183,531 02
Sackville—Improvements at	24,916 00
Fencing portion of line not heretofore fenced	15,983 36
New machinery for locomotive and car shops	50,214 73
Steam shovel	11,700 00
Improving grades on line	3,246 44
New Glasgow—Increased accommodation at	13,000 00
To put railway between Indiantown and Blackville into condition for operation	789 00
To increase water supply	11,222 15
Princess pier	3,778 22
Ice-houses	11,100 00
Total	1,506,248 26
Less refund on account of Riviere Ouelle Branch	39 00
Making the total cost on March 31, 1907	$2,744,937 89

Gibson Air compressor and reservoir. These were required in connection with the repair shops at Gibson.

Air brakes to freight cars—

One hundred and seventy-nine freight cars were equipped during the nine months with Westinghouse Automatic quick action air brakes.

To exchange drawbars of freight cars—

Ninety seven freight cars were changed from the link and pin drawbar to the M.C.B. coupler.

Time recorders and watchmen's clocks—

One clock and eight time recorders were purchased and installed for use in the motive power department. These are to be used to register the arrival and departure of the employees.

Rolling stock—

Twenty locomotives of the consolidation type for freight service, three switching locomotives, and one hundred and fifteen hopper cars, were purchased.

To provide side ladders on box cars—

Nine hundred and ten box freight cars were provided with side ladders, two to each car.

New machinery for locomotive and car shops—

This is for additional machinery for the construction and repair of locomotives and cars, and for the installation of it.

Explanations in regard to other expenditures on capital account will be found in the report of the Chief Engineer.

REVENUE ACCOUNT.

The gross earnings and the working expenses for the nine months' period compare as follows :—

Gross earnings	$6,248,311 00
Working expenses	6,030,171 83
Surplus	$ 218,139 17

The gross earnings for the nine months compare as follows with those of the corresponding nine months of the previous year :—

In 1906-07 (9 months)	$6,248,311 00
In 1905-06 (9 months)	5,586,155 21
Increase	$ 662,155 79

The earnings from passenger traffic compare as follow :—

In 1906-07 (9 months)	$1,952,438 88
In 1905-06 (9 months)	1,707,723 02
Increase	$ 244,715 86

The earnings from freight traffic compare as follows :—

In 1906-07 (9 months)	$4,032,745 00
In 1905-06 (9 months)	3,634,443 77
Increase	$ 398,301 23

The earnings from mails and express freight compare as follows :—

In 1906-07 (9 months)	$ 263,127 12
In 1905-06 (9 months)	243,988 42
Increase	$ 19,138 70

The earnings by mile of railway compare as follows :—

In 1906-07 (9 months)	$ 4,297 80
In 1905-06 (9 months)	3,863 39

The earnings by train mile compare as follows :—

In 1906-07 (9 months)	$ 1 23
In 1905-06 (9 months)	1·003

The number of passengers carried compare as follows:—

In 1906-07 (9 months)	2,044,847
In 1905-06 (9 months)	2,095,559
Decrease	50,712

There was a decrease of 57,980 in the number of local passengers, and an increase of 7,268 in the number of through passengers.

The weight of freight carried compares as follows :—

In 1906-07 (9 months)	2,606,073
In 1905-06 (9 months)	2,287,973
Increase	318,100

There was an increase in local freight of 249,238 tons and an increase in through freight of 68,962 tons.

The following is a comparative statement of a few of the chief articles of freight, showing the quantity carried in this nine months period, and in the corresponding period of the previous year :—

Articles.	1905-6. — 9 months.	1906-7. — 9 months.	Increase.	Decrease.
Barrels of flour and meal	1,456,180	1,531,140	74,960	
Bushels of grain	2,270,400	2,231,864		38,536
Lumber in superficial feet	382,381,426	452,602,703	70,221,277	
Head of live stock	94,933	97,381	2,448	
Coal in tons	483,286	635,480	152,194	
Manufactured goods in tons	594,763	658,850	269	
Cords of firewood	38,241	38,510	64,087	
All other articles in tons	403,734	398,348		5,386

There was an increase over the corresponding nine months of last year in the quantity of the following articles carried : Flour, meal and other mill products, butter and cheese, eggs, apples, calves, cattle, pigs, sheep, lumber logs, timber pulpwood, pit props, telegraph poles, railway ties, tanbark, firewood, shingles, clapboards, extract of hemlock bark, coal, ore, stone, lime and cement, brick, sand, iron and other metals, fresh, salted, dried and canned fish, clams, molasses, sugar, salted and fresh pork, salted and fresh beef, hides, skins and leather.

There was a decrease in the quantity of the following : Grain, potatoes, and other vegetables, hay and straw, horses and oysters.

WORKING EXPENSES.

The working expenses for the nine months compare as follows with those of the corresponding nine months of the previous year :—

In 1906-07 (9 months)	$5,925,321 83
In 1905-06 (9 months)	5,650,923 90
Increase	$ 274,397 93

The averages compare with those of the corresponding period of last year as follows :—

Per mile run by engine—	
In 1906-07 (9 months)	87·00
In 1905-06 (9 months)	80·75
Per mile run by trains—	
In 1906-07 (9 months)	116 89
In 1905-06 (9 months)	101 44
Working expenses per mile of railway—	
In 1906-07 (9 months)	$ 4,075 63
In 1905-06 (9 months)	3,908 18

The rent paid to the Grand Trunk Railway Company during the nine months period, $105,000, is not included in the above, as it would disturb the comparison with previous years; no corresponding charge relating to the cost of any portion of the railway having been included in the working expenses previous to the year 1898-99.

The permanent way and structures and all works of the railway received necessary repairs and are in good order.

During the nine months 466,759 ordinary ties and 272 sets of switches were put in.

37·43 miles of track were reballasted, 56,154 cubic yards of ballast were used.

2·52 miles of additional sidings were provided at various points.

Bridges, culverts, wharfs and buildings received necessary repairs.

The fences were repaired and 74·02 miles of fences were built.

The snow sheds and snow fences were repaired.

The rolling stock received necessary repairs, and its general condition is good, with the exceptions mentioned in the report of the superintendent of motive power.

Two switching locomotives were purchased: nine box freight cars, eleven platform cars, one oil tank car, and two coal cars of twenty tons capacity each, were built in the workshops of the railway, all to replace an equal number taken out of service.

STORES.

The value of stores purchased was	$2,281,468 44
The value of stores used was	2,447,075 60
The value of material sold was	174,289 58

The value of stores on hand at the end of the period was:

Miscellaneous	$ 342,024 32
Fuel	63,784 36
Roadway and bridge material	936,188 22
Total	$1,341,996 90

GENERAL.

The accounts for this fiscal period are presented in the form prescribed by the United States Inter-State Commerce Commission for American Railways, which form has been adopted by the Department of Railways and Canals for the use of Canadian railways.

It is believed that by this more uniform manner of presenting results, comparisons between the Intercolonial Railway and other railways will be more easily made.

In November, 1906, the office of chief accountant and treasurer was abolished, and Mr. Thomas Williams who occupied that position from July, 1882 was assigned to other duties.

The office of comptroller and treasurer was established, and Mr. S. L. Shannon, accountant of the Department of Railways and Canals, Ottawa, was transferred from that position and appointed comptroller and treasurer at Moncton.

Mr. C. F. Burns was appointed auditor of disbursements.

I have the honour to be, sir,

Your obedient servant,

D. POTTINGER,

General Manager Govt. Rys.

M. J. BUTLER, Esq., C.E.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE CHIEF ENGINEER,
MONCTON, N.B., June 15, 1907.

SIR,—I have the honour to submit the following report on capital account expenditure for the fiscal year ending March 31, 1907.

TO STRENGTHEN BRIDGES.

The following new steel bridges were erected during the year by the Canadian Bridge Company of Walkerville, Ont.: Enfield, N.S., one span riveted deck bridge, 111 feet, 8 inches ; Elmsdale, N.S., one span riveted through bridge, 150 feet ; Shubenacadie, N.S., three span, deck plate girder, one 98 feet 8 inches, one 100 feet 2 inches, and one 98 feet.

By the Dominion Bridge Company, Montreal, P.Q.:—

Nauwigewauk, N.B., three spans, riveted through bridge, one 99 feet 6 inches, one 100 feet, and one 99 feet 6 inches. St. Leonard (new masonry), two spans riveted, deck girders, 158 feet each, eight spans riveted deck girders, two 65 feet each, three 60 feet each, one 40 feet, and two 30 feet each, and three braced, trestle towers with six bents, one 39 feet high, one 46 feet high, one 47 feet high, two 55 feet high and one 59 feet high.

Mitchell bridge (new masonry), two spans riveted through Pratt trusses, 198 feet each, four spans, riveted deck girders, two 60 feet each and two 40 feet each, two braced, trestle bents, each 22 feet high.

The necessary alterations of the masonry of abutments and piers have been made, new floors put upon the bridges and the work of reconstruction completed.

Drummondville bridge was painted.

Plans and specifications were prepared, tenders called for, and contracts let for new steel bridges at St. Henri, Stewiacke, Truro, Hall's Creek, Humphrey's, Bic, Isle Verte, Harbour au Bouche, Brierly Brook, Bear Brook, Thomson, Dorchester, (Three), Anagance, Model Farm, Rothesay (Two), Boiestown, Doaktown and Boyer River. The work of construction of these bridges is going on.

Diversion of Line at St. Leonard—

The work in connection with this diversion has been completed. The new line was opened up for traffic December 16, 1906.

Diversion of Line at Mitchell—

The work in connection with this diversion was completed with the exception of some filling required for the approaches to the bridge, and a small amount of ballasting, which will be entirely completed during the coming year.

Improvements at Drummondsville—

The work in connection with the moving of the old station, and converting it into a freight shed, and remodelling and building an extension to the existing engine house was completed. The necessary grading required around the above work was done.

Engine-house, &c., at Chaudière Junction—

Considerable grading was done, and 16,233 feet of additional tracks were put in the new yards. Improvements were made to the water service. Plans and specifications were prepared for a stores and office building.

Engine-house, Machine Shops, &c., Rivière du Loup—

Improvements were made to the engine-house and water service.

To increase accommodation at St. Flavie—

The water service was extended, and 6,927 feet of additional sidings were put in and ballasted.

Improvements at Campbellton—

Plans and specifications were prepared, tenders called, and a contract let for laying a pipe line for the new water service. The dam and reservoir required for the above were built by day labour. The pipes, &c., required were supplied. 743 feet of sidings were put in.

To increase Accommodation at Halifax—

Plans and specifications were prepared, tenders called, and a contract let for the excavation required for the improvements on the upper side of Water street and the work commenced.

The filling required for the additional yard room between the shore and the quay wall of cribwork was carried on during the year. The material used was hauled by train from borrow pits at Lake View, and the material which was removed from the upper side of Water street was also used in the work.

Plans and specifications were prepared, tenders called, and contracts let for a 36 stall engine-house, freight car repair shop, a planing mill, and for double tracking the cotton factory branch.

Plans and specifications were also prepared, tenders called, and a contract let for dredging and removing pier No. 9, and facing up pier No. 8. This work was well advanced during the year.

The Cunard property on the east side of Water street, including wharfs, warehouses, &c., was acquired by the railway.

Improvements were made to the electric light plant and fire alarm system; 10,270 feet of sidings were put in.

To increase Accommodation at Truro—

The 30 stall engine-house was completed and boilers, induced draft plant, steam pumps, air compressors and hot blast system of heating and piping were installed. A

large quantity of excavation was done for additional tracks for approaches to the new engine-house, and 3,603 feet of new tracks were laid.

To increase Accommodation at St. John—

Preparations were made for the erection of Stanley and Wall street overhead bridges.

A tower house was erected in the east end of the yard.

To increase Accommodation at Sydney—

A concrete platform in connection with the new station was commenced; the work is about three-fourths completed.

A hot water system of heating was installed in the freight office.

The 15-ton pillar crane, which was purchased last year, was erected.

During the year, 1,356 feet of sidings were put in.

To increase Accommodation at Stellarton—

Alterations were made to the yard, and additional sidings put in.

Air Brakes to Freight Cars—

For details of this appropriation see report of G. R. Joughins, superintendent of motive power.

To increase Accommodation at Pictou—

The 9 stall engine-house was completed, and occupied by the railway.

The work of building and filling sea-wall in connection with the new engine-house was carried on during the year. The 75 foot turntable (purchased last year) was erected. The water service was extended, and 7,107 feet of new tracks laid.

The existing station was remodelled for a dwelling for the agent, and the necessary plumbing and a hot water heating system was installed.

Extension to Sydney Mines—

The ballasting of the main line and fencing was completed. A contract was let for a station, freight shed and platform at Sydney Mines. The work of construction is going on.

The land required for the new yard at Sydney Mines was purchased, part of the grading required was done, and working tracks laid.

Rolling stock—

For details of this appropriation see report of Mr. G. R. Joughins, superintendent of motive power.

Double Tracking Parts of the Line—

The double tracking of the line from Richmond to Windsor Junction was completed.

An electric semaphore was erected at Bedford.

A survey was made and plans and specifications prepared for double tracking the line from St. John to Hampton.

Plans and specifications were also made for double tracking the line from Moncton to Painsec Junction.

Increased accommodation and facilities along the line—

The following work was done under this appropriation:—

St. Moise, seating provided for station.
Chaudière, station provided.
Maccan, the concrete platform was completed; the rearrangement of the yard was also completed.
Milnikek, plans and specification were prepared, and tenders for a new station called.
Iona, a freight shed was provided.
Shediac, stone station provided.
St. Alexis, freight shed provided.
Salmon lake, a contract let for new freight shed.
Ste. Perpetue, a station provided.
Dalhousie, a new platform built.
Wallace bridge, a well provided.
St. Romuald, two electric semaphores were put up.
Millerton, plans and specifications were prepared, and tenders for a dwelling for the agent called.

ADDITIONAL SIDINGS AND SPUR LINES.

	Feet.
Windsor Junction (new siding)	802
Aitkins (newsiding)	227
Lorne (new siding)	500
Iona (new siding)	680
River Denys (new siding)	200
Plumweseep (new siding)	460
Sweeney's Brook (new siding)	325
Beau Rivage (new siding)	341
Sayabec (new siding)	986
Bic, (new siding)	600
St. Jean Port Joli (extension)	750
Trois Saumons (extension)	120
Elgin Road (extension)	240
L'Islet (extension)	1,170
St. Henri Junction (extension)	266
St. Leonard Junction (new siding)	268
Ste. Rosalie (new siding)	1,260
Londonderry (new siding)	2,287
Amherst (new siding)	332

Spur lines were also built at Wallace and Fort Lawrence.

Extension to Dalhousie Wharf—

Very little was done with this appropriation during the year.

Locomotive and car shops and land purchase at Moncton—

The balance of the land required for the new yard was paid for.

Contracts were let for a freight car repair shop, passenger car repair shop, paint shop, planing mill, stores and office building, locomotive and erecting shops, and the work of construction is going on.

A survey was made for a new sewer from the new shops to Johnathan's creek, which is now under construction.

The work of grading for the new yard was carried on during the year, and 13,081 lineal feet of sidings were laid.

Improvements at Sackville—

Plans and specifications were made, tenders asked, and a contract let for water works, which will be constructed during the coming year. The pipe and other materials required for the above were delivered on the ground by the railway.

Plans and specifications were prepared, tenders asked, and a contract let for a stone passenger station, and the work of construction has been commenced.

Fencing portions of the line not heretofore fenced—

During the year 16,007 rods of Strathy wire fence were built on the Canada Eastern, and 1,129 rods on the Wallace spur.

New machinery for locomotive and car shops—

For details of this appropriation see report of Mr. G. R. Joughins, superintendent of Motive Power.

Improving grades on line—

The improving of the grades at St. Wenceslas and Daveluyville were completed, and ballasted.

Increased accommodation at New Glasgow—

A freight shed and platform were provided. The yard rearranged and 2,100 feet of new sidings laid.

To put railway between Indiantown and Blackville into condition for operation—

Nothing was done under this appropriation during the year except some engineering work.

To increase water supply—

During the year work was done on the water supplies at Ste. Anne, Loggieville, Chatham Junction, Blackville, Gibson, Boiestown, Upper Cross Creek, St. Fabien, Trois Pistoles, Windsor Junction, Isle Verte and Bathurst.

Glengarry water supply and reservoir—

Plans and specifications were made, tenders asked, and a contract let for a tank, pipe line and reservoir. The pipes, &c., have been supplied by the railway and delivered on the ground.

Increased accommodation at Springhill Junction—

Nothing was done under this vote.

Raising wharf at Pictou landing—

A portion of this wharf was raised during the year. The material used was supplied by the railway and the work done under contract with J. W. Dobson.

Improvements at Rothesay—

Nothing was done under this vote.

Increased accommodation at Antigonish—

Some grading was done around the yard and a platform was provided at the freight shed. On account of the change in the location of the station and freight shed the fire hydrant was moved.

Improvements at Newcastle—

Pipes and materials were supplied for extending the water service.

Original Construction—

Under this vote amounts were paid as follows:—

A. B. Schurman, 0·21 acres of land and interest at Oxford, N. S.	$130 04
Geo. England, 6 acres of land at George's river	223 14
R. T. McIllreith, for legal expenses in connection with Geo. England's land	40 40

To dredge and blast rock at D.W.T., Halifax—

During the year, 1,791 cubic yards of rock were removed from between pier No. 3 and No. 4.

Steam Shovel—

A steam shovel was provided.

Time Recorders and Watchmen's Clocks—

One clock and eight time recorders were purchased and installed for the use of the mechanical department.

To Exchange Draw-bars on Freight Cars—

For details of this appropriation see report of Mr. G. R. Joughins, superintendent of motive power.

Ice-houses—

Ice-houses were provided at Truro, Campbellton, Gibson, Chaudière Junction, Mulgrave, Sydney and Lévis.

Air compressor at Gibson—

This was provided.

Princess Pier—

A trestle was built to carry the steam crane, which is used for discharging coal from vessels. A siding, which was required for this purpose, was laid on the pier.

I have the honour to be, sir,
Your obedient servant,
WM. McKENZIE,
Chief Engineer.

D. Pottinger, Esq., I.S.O.,
General Manager, Government Railways,
Moncton, N.B.

INTERCOLONIAL RAILWAY,
OFFICE OF THE ENGINEER OF MAINTENANCE,
MONTON, N.B., May 31, 1907.

SIR,—I have the honour to submit the report of the Maintenance of Way and Works Department for the nine months from July 1, 1906, to March 31, 1907.

TRACK.

During the year 182·66 miles of 56, 58, 67 and 110 lb. rails were taken up and replaced with 67 and 80 lb. rails.

TIES.

During the year 466,759 ordinary ties and 272 sets of switch ties were put in.

BALLASTING.

During the year 37·43 miles of track was ballasted, using 43,896 cubic yards of gravel, and 12,258 cubic yards of ashes and cinders.

SWITCHES AND SEMAPHORES.

Distant semaphore signals were erected at the following stations:—

Albion, 1.
Woodburn, 2.
St. Eloi, 1.
Kent Junction, 1.
Bedford, 1.
Richmond, 1.
Truro, 1.

104 new switches were installed during the year.

New telegraph signals were provided at the following stations:—

Shediac.
Belmont.
Pictou.
Richmond.
Elmsdale.
McIntyre's Lake.
Sydney.
Windsor Jct.
Bedford.
North Sydney Jct.

Necessary repairs were made to all semaphores, switches and station telegraph signals throughout the line.

SIDINGS.

During the year 2·52 miles of additional siding accommodation has been provided at different points on the line for maintenance account.

FENCE BUILT BY OUR OWN MEN.

20·47 miles of Page, Ideal, New Brunswick Wire Fence Company's wire and woven wire fence were built at different points on the line.

Necessary repairs were made to fences throughout the line.

Built by contract, 53·55 miles of Strathy wire fence.

SNOW FENCES.

There was built during the year 373 rods of stationary snow fence 8 feet high and 3,060 rods 12 feet high.

Necessary repairs were made to snow fences and snow sheds where required.

WHARFS AND TRESTLES.

Repairs.

St. John, ballast wharf.
St. John, coal trestle.
St. John, long wharf.
Point du Chene, wharf.
Springhill Junction, coal trestle.
Sackville, wharf.
Truro, Thomas' coal trestle.
Richmond, coal trestle.
Richmond, slip.
Richmond, quay wall.
Halifax, shed No. 1, doors, &c.
Halifax, pier No. 2.
Halifax, pier and shed No. 3.
Halifax, pier and shed No. 4.
Halifax, pier No. 6.
Halifax, pier No. 8.
Halifax, stairway on pier No. 8.
Halifax, D.W.T., coal trestle.
Dartmouth, cribwork.
Pictou, freight shed wharf.
Pugwash, wharf.
Stellarton, coal chute.
Trenton, cribwork.
Brierly Brook, cribwork.
Antigonish, coal trestle.
Mulgrave, wharf.
Mulgrave, dry wall.
North Sydney, wharf.
Dalhousie, wharf.
Lévis, wharf.
Lévis, cribwork.
Lévis, Prince's pier.
Lévis, retaining wall.
Drummondville, coal trestle.

WHARFS AND TRESTLES.

New Work.

Pictou, passenger landing.

BRIDGES AND CULVERTS.

Repairs.

St. John, wall street bridge.
St. John, draw bridge at ballast wharf.
Hammond River, bridge.
Otty's, overhead bridge.
Quispamsis, bridge warners.
Lakeside, bridge warners.
Musquash, bridge warners.
McCafferty's, overhead bridge.
Partage Branch, bridge warners.
Moncton, Mountain road bridge.
Upper Dorchester, Crowsen's Aboideau.
Dorchester, culvert.
Fort Lawrence, overhead bridge.
Between Wentworth & Grenville, culvert.
Stewiacke, 1 mile west of, culvert.
Miller's brick Yard, ¼ mile west of, culvert.
Miller's Crossing, culvert.
Milford, 1¼ miles west of, culvert.
Milford, culvert.
Milford, east of, culvert.
Richmond, culverts.
West River, bridge.
Dartmouth Branch, culvert.
Pugwash Junction, culvert.
Scotsburn, culvert.
Lyon's Brook, culvert.
McLean Street, New Glasgow, cribwork.
Woodburn, (Stewart's Brook), culvert.
West Merigomish, bridge.
West Merigomish, cattle guard.
Pine Tree, bridge.
Murphy's near Antigonish, cribwork.
Taylor's Road, culvert.
Antigonish, 1¼ miles east of, culvert.
Pomquet, culvert.
Clearwater, culvert.
Boiestown, culvert.
Boiestown, bridge.
Doaktown, bridge.
Upper Blackville, culvert.
Blackville, culvert.
Blackville, bridge.
Blackville, (Indiantown Branch), culvert.
Chelmsford, culvert.
Barnaby River, bridge.
Chatham, three culverts.
Loggieville, culvert.
Pond's Brook, bridge.
Bathurst, culvert.
Petit Roche, culvert.
Matapedia, culvert.
Sayabec, culvert.
Rivière du Loup Branch, bridge.
Old Lake Road, two culverts.
Ste. Helene, culvert.
Between St. Pascal and St. Philippe, bridge, (Langelier).
St. Pacome, culvert.
Ste. Anne, culvert.
Cap St. Ignace, west of, culvert.
St. Pierre, culvert.
St. Valier, culvert.
St. Charles, bridge, (Boyer).
Levis, near Paradis'mill, culvert.
Chaudière Junction, east of, culvert.
St. Nicholas, east of, bridge.
St. Apollinaire, east of, culverts.
St. Apollinaire, east of, bridge.
St. Apollinaire, culvert.
St. Apollinaire, west of, culvert.

Heatherton, 1 mile east of, culvert.
Tracadie Road, retaining wall, bridge.
Linwood, drain.
Harbor au Bouche, drain, cattle guard.
West River, 2 miles west of, culvert.
Iona, culvert.
Iona, ½ mile west of, culvert.
Iona, 1 mile west of, culvert.
Grand Narrows, bridge.
Grand Narrows, 3½ miles east of, cattle guards.
Grand Narrows, 2 miles east of, culvert.
Grand Narrows, 1 mile east of, culvert.
Boiesdale, ½ mile east of, bridge.
Boiesdale, 1 mile east of, cattle guard.
George's River, culvert.
George's River, bridge.
Gibson, culvert.
Manzer's bridge.
Manzer's, culvert.
Zion, three culverts.
Cross Creek, two culverts.
Upper Cross Creek, bridge.
Laurier, east of, culvert.
Laurier, west of, culvert.
Delotbinière, east of, culvert.
Delotbinière, west of, culvert.
Villeroy, east of, culvert.
Villeroy, culvert.
Daveluyville, east of, culvert.
Aston Junction, east of, culverts.
Aston Junction, west of, culverts.
St. Wenceslas, west of, culverts.
St. Leonard, culvert.
Between St. Leonard & St. Monique, culverts.
Mitchell, bridge.
Drummondville, west of, culverts.
St. Germain, east of, bridge.
St. Germain, west of, culverts.
Duncan, culvert.
St. Eugene, culverts.
St. Eugene, east of, culvert.
St. George, bridge.
Ste. Rosalie, culvert.

BRIDGES AND CULVERTS.

New Work.

Passekeag, overhead bridge, warners.
Hilden, open beam culvert.
Windsor Junction, cedar culvert.

MASONRY WORK DONE.

Repairs.

Passekeag, culvert.
Athol, 1 mile east of, box culvert.
Springhill Junction, 2 miles west of, culvert.
Springhill Junction, 1½ miles west of, box culvert.
Springhill Junction, 1¼ miles west of, culvert.
Springhill Junction, ash pits.
Oxford Junction, 1¼ miles west of, arch culvert.
Greenville, culvert.
Wentworth, 2 miles west of, bridge.
Wentworth, 2 miles east of, culvert.
Wentworth, 2½ miles east of, culvert.
Folleigh, 1 mile west of, arch culvert.
Londonderry, culvert.
Londonderry, east of, culvert.
Truro, 2¼ miles west of, bridge.
Hilden, west of, bridge.
Brookfield, east of, box culvert.
Stewiacke, 1 mile west of, box culvert.
Shubenacadie, 2 miles west of, arch culvert.
Shubenacadie, 1¾ miles west of, culvert.
Milford, 1½ miles west of, culvert.
Milford, ½ mile west of, culvert.
Milford, two culverts.
Elmsdale, box culvert.
Wellington, east of, box culvert.
Bedford, ¼ mile east of, culverts.
Glengarry, ¾ mile west of, culvert.
Wallace, bridge.
Malagash, west of, four culverts.
Pugwash Junction, east of, two culverts.
Tatamagouche, bridge.
Woodburn, bridge.
Antigonish, 1½ miles east of, culvert.
South River, 2 miles west of, two culverts.
South River, 1½ miles west of, culvert.
Pomquet, 1 mile east of, culvert.
Pomquet, culvert.
Mulgrave, bridge.
George's River, bridge.
Rivière du Loup, bridge.
Rivière du Loup, west of, two culverts.
Old Lake Road, two culverts.
Ste. Helene, east of, culvert.
St. Philippe, bridge.
Ste. Anne, east of, culvert.
Ste. Anne, two culverts.
St. Charles, bridge.
Chaudière Junction, culvert.

PAINTING.

Bridges.

Mulgrave, new transfer bridge.
Point Tupper, old transfer bridge.
Point Tupper, east of, bridge No. 7.
Mines Road, east of, bridge No. 7.
River Inhabitant, bridge.
River Denys, bridge.
Mill Brook, bridge No. 21.
Orangedale, bridge.
Jamesville, bridge No. 3.
Jamesville, bridge No. 4.
Ball Creek, bridge.

BUILDINGS AND PLATFORMS.

Repairs.

St. John, train shed walls.
St. John, freight shed No. 1.
St. John, freight shed No. 2.
St. John, freight shed No. 7.
St. John, freight shed No. 8.
St. John, platform, Exhibition Building.
St. John, baggage room.
St. John, dwelling house.
St. John, train shed.
St. John, new freight office.
St. John, train shed platform.
St. John, shelter in No. 8, freight shed.
St. John, station doors.
St. John, dwelling house, roof, Lombard street.
St. John, freight shed, roof.
St. John, windows, blacksmith shop add. power house.
St. John, windows station.
St. John, Gilbert's Lane, cattle pen.
St. John, platform No. 2 shed.
St. John, elevator building.
St. John, platform, cattle shed.
St. John, floor cattle shed, office.
St. John, coachmen's shelter.
St. John, custom's room.
St. John, coal shed.
St. John, ticket office.
St. John, freight house, shed No. 9.
St. John, train shed, office.
St. John, shovels at elevator.
St. John, shed for time clock.
St. John, Dominion Express Co., room.
St. John, tool box for St. John station.
St. John, coal box for signal tower.
St. John, new freight office.
St. John, mowry factory building.
Torryburn, station.
Torryburn, platform.
Renforth, platform.
Jubilee, station platform.
Nauwigewauk, station platform.
Nauwigewauk, freight house.
Lakeside, station.
Hampton, platform.
Hampton, freight shed platform.
Hampton, w.c.
Bloomfield, platform.
Bloomfield, station.
Bloomfield, coal house.
Norton, platform.
Norton, station, roof.
Apohaqui, platform.
Apohaqui, freight house platform.
Apohaqui, station windows.
Sussex, platform.
Sussex, freight house platform.
Sussex, station roof.
Sussex, engine-house.
Sussex, loading platform.
Sussex, station windows.
Sussex, doors, freight house.
Plumweseep, station platform.
Penobsquis, station platform.
Penobsquis, station windows.
Penobsquis, freight house doors.
Anagance, station.
Petitcodiac, baggage room.
Petitcodiac, station.
Petitcodiac, freight shed doors.
Salisbury, station.
Boundary Creek, station.
Moncton, store room, track blacksmith shop.
Moncton, track blacksmith shop, extension.
Moncton, coaling plant.
Moncton, track blacksmith shop, foundation.
Moncton, for steam hammer.
Moncton, freight house platform.
Moncton, station platform.
Moncton, floor, machine shop.
Moncton, ventilator, paint shop.
Moncton, switchman's shanty.
Moncton, rest house building.
Moncton, round house roof.
Moncton, new floor, track shop office.
Moncton, sidewalk to shops.
Moncton, machine shop roof.
Moncton, shelving store room, general office.
Moncton, erecting shop, floor.
Moncton, government cottage No. 1.
Moncton, freight house.
Moncton, electric department, office.
Moncton, paint room, track shop.
Moncton, traffic manager's cottage.
Moncton, track blacksmith shop, loading platform.
Moncton, cottage No. 9.
Moncton, boiler house, mechanical dept.
Moncton, paint shop, mechanical dept.
Moncton, roundhouse.
Moncton, dumb waiter, general offices.
Moncton, engine room, track blacksmith shop.
Moncton, yardmaster's office.
Moncton, windows, erecting shop.
Moncton, machine shop.
Moncton, station doors.
Moncton, tool room, mechanical dept.
Moncton, pulleys for track shop.
Moncton, ventilator, track shop.
Moncton, iron rack, track shop.
Moncton, maintenance office, general office.
Moncton, freight house office.
Moncton, W.S. store No. 1.
Moncton, roof, boiler house.
Humphrey's, station platform.
Shediac, station platform.
Point du Chene, cattle pens and sheep racks.
Point du Chene, freight house platform.
Point du Chene, coal shed.
Point du Chene, ice-house.
Point du Chene, agent's dwelling.

Point du Chene, baggage room.
Painsec Junction, platform.
Painsec Junction, station.
Calhoun's, station.
Memramcook, loading platform.
Memramcook, station.
Memramcook, freight house.
College Bridge, station.
Evan's, station.
Evan's, loading platform.
Sackville, cattle pen.
Sackville, station platform.
Amherst, station platform.
Amherst, baggage room.
Amherst, station.
Nappan, loading platform.
Nappan, station.
Nappan, sheathing waiting room, office, &c.
Maccan, station.
Athol, floor, station.
Springhill Junction, station, waiting rooms.
Springhill Junction, engine-house doors.
Springhill Junction, tool house.
Salt Springs, station.
River Philip, station platform.
Oxford Junction, loading platform.
Oxford Junction, station.
Thomson, station.
Thomson, freight house.
Greenville, station.
Greenville, platform.
Westchester, station.
Westchester, station flue.
Between Westchester & Wentworth, tool house.
Wentworth, station floor.
Wentworth, station platform.
Wentworth, freight house.
Wentworth, coal shed.
Folleigh, station flue.
Londonderry, station platform.
Londonderry, station flue.
Londonderry, station roof.
Londonderry, cattle pen.
East Mines, station platform.
East Mines, station flue.
Debert, station roof.
Belmont, loading platform.
Belmont, station cellar.
Onslow, station platform.
Truro, express office.
Truro, despatcher's office.
Truro, tool house flue.
Truro, baggage room.
Truro, coal shed.
Truro, floor, waiting room.
Truro, mail room.
Alton, station platform.
McKay's, station.
Stewiacke, station.
Stewiacke, platform.
Stewiacke, station flue.
Shubenacadie, station.
Shubenacadie, platform.
Elmsdale, station.
Enfield, office and waiting room.
Wellington, passenger platform.
Windsor Junction, tank house.
Windsor Junction, station.
Windsor Junction, roof, baggage room.
Bedford, station chimney.
Fairview, station.
Richmond, roundhouse.
Richmond, machine shop.
Richmond, car shop.
Richmond, blacksmith shop.
Richmond, cattle shed.
Richmond, D.A.R. building.
Richmond, track scale.
Richmond, ash pits.
Halifax, roundhouse.
Halifax, cattle shed.
Halifax, grain elevator.
Halifax, shed No. 1.
Halifax, shed No. 2.
Halifax, shed No. 3.
Halifax, shed No. 4.
Halifax, North street station.
Halifax, train shed.
Halifax, electric power house.
Halifax, car cleaning shed.
Halifax, Gerrish street house.
Halifax, shelving office shed No. 1.
Halifax, new baggage room & checker's.
Halifax, office, shed No. 2.
Halifax, coal bin under shed No. 3.
Halifax, D.A.R. freight shed.
Halifax, wash house, North street.
Halifax, hay shed.
Halifax, shed No. 8.
Halifax, power house, extending fan room.
Halifax, train shed, roof.
Halifax, yard delivery office.
Halifax, shunter's shanty.
Halifax, postal building.
Halifax, carpenter shop.
Halifax, roundhouse roof.
Halifax, switch house.
Halifax, D.W.T. roof, car inspector's shanty.
Halifax, tool house.
Valley, platform.
Valley, station.
Riversdale, loading platform.
Hopewell, platform.
Ferrona Junction, freight shed.
Riverton, platform.
Windsor Junction, store house.
Waverly, station platform.
Waverly, station.
Dartmouth, platform.
Dartmouth, station.
Dartmouth, tool house.
Oxford Junction, station platform.
Oxford Junction, engine-house.
Oxford Junction, coal house.
Oxford, station platform.
Oxford, coal house.
Oxford, station.
Conn's Mills, platform.
Conn's Mills, coal house.
Pugwash, platform.
Pugwash, coal house.

Pugwash, station.
Wallace Bridge, station platform.
Wallace Bridge, station.
Malagash, station platform.
Malagash, station.
Tatamagouche, station.
Denmark, station platform.
River John, station platform.
River John, station.
Scotsburn, station.
Lyon's Brook, station.
Pictou, freight shed.
Pictou, trackmaster's office.
Pictou, baggage room.
Lockbroom, station.
Westville, station platform.
Westville, loading platform.
Westville, station.
Stellarton, baggage room.
Stellarton, freight shed.
Stellarton, roundhouse.
Stellarton, switch house.
New Glasgow, loading platform.
New Glasgow, tool house.
New Glasgow, freight shed.
New Glasgow, station.
New Glasgow, platform.
New Glasgow, Conley's coal chute.
Trenton, station.
West Merigomish, station.
West Merigomish, station flue.
Merigomish, W.C.
Barney's River, station flue.
Antigonish, baggage room.
Antigonish, platform.
Antigonish, station.
Antigonish, freight shed.
South River, station.
Tracadie, station.
Harbor au Bouche, station.
Harbor au Bouche, platform.
Pirate Harbor, station.
Mulgrave, ice-house.
Mulgrave, freight shed.
Point Tupper, coal shed.
Point Tupper, station office.
Point Tupper, station.
Point Tupper, foundation, power house.
McIntyre's Lake, station.
River Deny's, cattle pen.
Alba, station.
Grand Narrows, station platform.
Shenacadie, station buildings.
Christmas Island, station.
Boiesdale, station.
George's River, platform.
North Sydney Junction, removing station buildings.
North Sydney Junction, station.
North Sydney, station.
North Sydney, cattle pen.
North Sydney, freight house.
North Sydney, freight shed on wharf.
Leitche's Creek, station.
Sydney River, station platform.
Sydney, engine-house.
Sydney, freight shed.
Sydney, bonded ware room.
Sydney, boiler shed at roundhouse.
Sydney, station.
Sydney, coal chute at roundhouse.
Loggieville, engine-house.
Chatham, agent's dwelling.
Blackville, station.
McNamee's, shelter.
Boiestown, power house.
Boiestown, coal shed and W.C.
Boiestown, station.
Cross Creek, station.
Marysville, station.
Gibson, station.
Gibson, blacksmith shop.
Fredericton, power house.
Fredericton, station platform.
Fredericton, carpenter shop.
Berry's Mills, tool house.
Canaan, station kitchen.
Canaan, loading platform.
Canaan, station platform.
Coal Branch, platform.
Harcourt, station.
Harcourt, platform.
Harcourt, tool house.
Acadiaville, station.
Acadiaville, loading platform.
Rogersville, station platform.
Chatham Junction, station platform.
Chatham Junction, cattle pen.
Derby Junction, platform.
Millerton, station.
Indiantown, station.
Newcastle, freight shed.
Newcastle, coal shed.
Newcastle, oil shed.
Newcastle, wharf platform.
Newcastle, engine-house.
Newcastle, trestle.
Beaver Brook, station.
Red Pine, station platform.
Gloucester Junction, station platform.
Bathurst, freight house.
Bathurst, station platform.
Bathurst, station.
Petit Roche, station platform.
Petit Roche, station.
Jacquet River, freight house platform.
Jacquet River, station.
Nash's Creek, station.
Dickie's, station platform.
New Mills, station.
Charlo, station.
Craig's, shelter.
Eel River, shim house.
Dalhousie Junction, freight house.
Dalhousie, engine-house.
Dalhousie, freight house.
Dalhousie, station.
Campbellton, superintendent's house.
Campbellton, section shanty.
Campbellton, roundhouse.
Campbellton, station.
Campbellton, coal shed.
Campbellton, station platform.
Campbellton, yardmaster's shanty.
Moffatt's, station.
Flat Lands, station.

Matapedie, station platform.
Matapedia, station.
St. Alexis, station.
Millstream, station platform.
Millstream, station.
Assametquaghan, station platform.
Beau Rivage, station.
Causapscal, station platform.
Causapscal, station.
Salmon Lake, station.
Amqui, station.
Cedar Hall, station platform.
Cedar Hall, freight shed.
Sayabec, station.
St. Moise, station.
Little Métis, station.
St. Octave, station.
Ste. Flavie, platform.
Ste. Flavie, station.
Ste. Flavie, pump house.
Ste. Flavie, coal shed.
St. Luce, station.
St. Anaclet, station.
Rimouski, station.
Sacré Cœur, station.
St. Fabien, station.
St. Simon, station.
St. Simon, water tank.
Trois Pistoles, agent's house.
Trois Pistoles, station.
St. Eloi, station.
Isle Verte, station.
Isle Verte, tank.
St. Arsene, station.
Cacouna, station.
Rivière du Loup, baggage room.
Rivière du Loup, store building.
Rivière du Loup, station.
Old Lake Road, station.
St. Alexandre, station platform.
St. Andre, station platform.
St. Paschal, station platform.
Rivière Ouelle, station platform.
Rivière Ouelle, coal platform.
St. Pacome, station platform.
Ste. Anne, station platform.
Ste. Louise, station platform.
L'Islet, station platform.
Cap St. Ignace, station platform.
St. Pierre, station platform.
St. Pierre, loading platform.
St. Pierre, cattle pen.
St. François, station platform.
St. Valier, station platform.
St. Michael, station platform.
St. Charles, station platform.
St. Charles, pump house.
St. Charles Lake, pump house.
Levis, superintendent's office.
Levis, agent's house.
Levis, trackmaster's office.
Hadlow, sidewalk.
St. Romuald, station.
St. Romuald, freight shed.
Chaudière Junction, engine-house.
Chaudière Junction, switchman's shanty.
Chaudière Junction, tank.
Chaudière Junction, transfer shed.
Chaudière Junction, ice-house.
Chaudière, station.
St. Appolinaire, station.
St. Appolinaire, station platform.
St. Apollinaire, freight shed.
Laurier, station.
Delotbinere, station.
Villeroy, station.
Manseau, sectionmen's dwelling.
Manseau, freight shed.
Manseau, station.
Lemieux, station.
Daveluyville, station.
Daveluyville, station platform.
Aston Junction, station.
St. Leonard Junction, coal shed.
St. Leonard Junction, station.
St. Leonard Junction, agent's dwelling.
Nicolet, station.
St. Monique, station.
St. Monique, platform.
St. Perpetue, station.
St. Perpetue, station platform.
Mitchell, station.
Mitchell, station platform.
Carmel, station platform.
Carmel, station.
St. Cyrille, station platform.
St. Cyrille, W.C.
St. Cyrille, station.
Drummondville, engine-house.
Drummondville, freight shed.
Drummondville, carpenter shop.
Drummondville, station platform.
St. Germain, stock pen.
St. Germain, station.
St. Eugene, station.
St. Eugene, station platform.
Ste. Rosalie, station.

BUILDINGS AND PLATFORMS.

New Work.

St. John, platform for Agricultural society.
Petitcodiac, baggage room.
Moncton, temporary platform for Barnum's circus.
Moncton, electric battery house.
Moncton, shed for planer.
Belmont, W.C. and coal shed.
Halifax, office, pier No. 8.
Halifax, car inspector's office, C.P.R.
Sydney, boiler shed at roundhouse.
Sydney Mines Branch, tool house.
Sydney Mines Branch, coal shed.
Bathurst, pump house.
Dickie's, shelter, (rebuilt).
Ste. Flavie, hand car house.
Bic, hand car house.

PAINTING.

Moncton, hopper's shop.
Painsec Junction, station.
Painsec Junction, baggage room.
St. Octave, freight shed.
Windsor, platform.
Windsor, station.
Mount Uniacke, platform.
Mount Uniacke, station.
Beaver Bank, platform.
Beaver Bank, station.
Ellershouse, platform.
Ellershouse, station.
Newport, platform.
South Uniacke, platform.
Windsor Junction, freight shed.
Windsor Junction, platform.
Windsor, culvert.
Mount Uniacke, 1½ miles east of, bridge.
Ellershouse, culvert.
St. Croix, near Ellershouse, bridge.
Newport, culvert.
Windsor Junction, culvert.
Newport, ½ mile east of, culvert.

In addition to the ordinary repairs I beg leave to append a list of extraordinary work done with cost of same :—

Angle plates and bolts used in laying 80-lb. rails	$ 58,560 00
Repairs to Lévis cribwork, material and labour	5,604 95
Repairs to Point du Chêne wharf, material	4,629 84
Repairs to point du Chêne wharf, labour	1,886 87
Repairs to West River bridge, material	10,533 02
Repairs to West River bridge, labour	4,021 16
Heating station at Point Tupper	418 00
New station at Pugwash Junction (part payment)	405 00
New station at Belmont (part payment)	3,375 00
	$ 89,433 84
Relaying rails, 80-lb	12,776 07
Relaying rails, 67-lb	976 04
	$ 103,185 95

GENERAL.

New buffers were made and set up at different points on the line, where required and repairs made where necessary.

Repairs were made to crossings at various points on the line.

Glass was put in and glazing done where necessary.

A number of old box car tops were repaired and fitted up during the year for hand-car and tool-houses.

Ladders for buildings and semaphores were provided where required along the line.

Outhouses and approaches to public road crossings were whitewashed where required.

Painting has been done to the semaphores, switches and telegraph signals throughout the line, where required.

Necessary repairs were made to hand-car, trollies, baggage trucks and wheelbarrows throughout the line.

Necessary repairs were made to steam shovels when required.

Boxes were made for the packing of second-hand spikes and bolts, when required.

Necessary repairs were made to steam shovels, when required.

In concluding this report I wish to state that the maintenance of the road, buildings and bridges has been fully looked after and I feel that the road was never in better condition than at present.

I have the honour to be, sir,

Your obedient servant,

T. C. BURPEE,

Engineer of Maintenance of Way and Works.

D. POTTINGER, Esq.,
General Manager, Government Railways,
Moncton, N.B.

No. 1.—INTERCOLONIAL RAILWAY.

Capital Account, 9 Months ended March 31, 1907.

1906.	Dr.	$ cts.	$ cts.	1906.	Cr.	$ cts.
June 30..	To Cost of Intercolonial Railway to date.....	.....	81,238,728 63	June 30..	By Dominion of Canada	81,238,728 63
1907.						
Mar. 31..	To Strengthen bridges.....	118,272 88				
	Diversion of line at St. Leonard Junction ..	5,485 72				
	Diversion of line at Mitchell	3,986 86				
	Improvements at Drummondville....	3,681 01				
	Engine-house, &c., at Chaudière Junction..	31,821 23				
	Engine-house, machine shop, &c., Rivière du Loup	5,998 72				
	Increase accommodation at Ste. Flavie ...	16,914 78				
	Improvements at Campbellton	5,529 85				
	Increased accommodation at Halifax... ..	260,124 63				
	Increased accommodation at Truro.	83,652 83				
	Increased accommodation at St. John.....	2,259 41				
	Increased accommodation at Sydney.	17,612 69				
	Increased accommodation at Stellarton	2,810 47				
	Air brakes to freight cars....	21,000 00				
	Increased accommodation at Pictou	74,638 18				
	Extension to Sydney Mines	22,195 85				
	Rolling stock.....	343,676 86				
	Double tracking parts of line	50,751 82				
	Increased accommodation and facilities along line	15,184 21				
	Additional sidings and spur lines	32,433 72				
	Extension of wharf at Dalhousie..... ..	106 45				
	Locomotive and car shops and land purchase at Moncton.....	183,531 02				
	Improvements at Sackville	24,916 00				
	Fencing portion of line not heretofore fenced	15,983 36				
	New machinery for locomotive and car shops	50,214 73				
	Improving grades on line.....	3,246 44				
	Increased accommodation at New Glasgow.	13,000 00				
	Put railway between Indiantown and Blackville in condition for operation.....	789 00				
	Increase water supply.	11,222 15				
	Increased accommodation at Springhill Junction	20 94				
	Raising wharf at Pictou Landing.....	14,989 05				
	Improvements at Rothesay.....	47 16				

Increased accommodation at Antigonish	1,418 42					
Improvements at Newcastle	2,760 96					
Water tank and reservoir at Glengarry	1,585 78					
Steam shovel	11,700 00					
Time recorders and watchmen's clocks	1,285 50					
Original construction	573 66					
Dredge and blast rocks at deep water terminus, Halifax	19,360 58					
Exchange draw bars of freight cars	12,531 20					
Provide side ladders on box cars	2,275 00					
Gibson air compressor and reservoir	1,780 91					
Ice-houses at various points	11,100 00					
Princess pier	3,778 22					
	1,506,248 26					
Less—Amount of cheque for $39 from J. S. O'Dyer, being refund of overpayment for lands taken for River Ouelle Branch	39 00					
		1,506,209 26	1907. Mar. 31.	By Dominion of Canada		1,506,209 26
		82,744,937 89				82,744,937 89

E. & O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller.

No. 2.—INTERCOLONIAL RAILWAY.

Revenue Account, 9 Months ended March 31, 1907.

Expenditure.	$ cts.	Earnings.	$ cts.
Maintenance of way and structures	1,111,888 68	Passenger earnings	1,952,438 88
Maintenance of equipment	1,180,521 16	Freight "	4,032,745 00
Conducting transportation	3,485,224 83	Mail and express earnings	235,039 88
General expenses	147,537 16	Miscellaneous earnings	28,087 24
	5,925,171 83		6,248,311 00
Rental of leased lines	105,0 0 00		
	6,030,171 83		
Balance	218,139 17		
	6,248,311 00		6,248,311 00

E. & O. E.
Moncton, N.B.

S. L. SHANNON,
Comptroller.

No. 3.—INTERCOLONIAL RAILWAY.

Maintenance of Way and Structures, 9 Months ended March 31, 1907.

		$ cts.
No. 1.	Repairs to roadway	716,139 78
2.	Renewals of rails	37,950 17
3.	" ties	147,909 14
4.	Repairs and renewals of bridges and culverts	65,637 50
5.	" fences, road crossings, signs and cattle-guards	22,654 06
6.	" buildings and fixtures	104,310 19
7.	" docks and wharfs	12,531 12
8.	" telegraph	1,220 67
9.	Stationery and printing	3,201 66
10.	Other expenses	334 39
		1,111,888 68

E. & O. E.
Moncton, N.B.

S. L. SHANNON,
Comptroller.

No. 4.—INTERCOLONIAL RAILWAY.

Maintenance of Equipment, 9 Months ended March 31, 1907.

		$ cts.
No. 11.	Superintendence	66,372 81
12.	Repairs and renewals of locomotives	476,210 12
13.	" passenger cars	166,813 88
14.	" freight cars	327,658 24
15.	" work cars	13,808 27
16.	" marine equipment	8,522 81
17.	" shop machinery and tools	56,912 93
18.	Stationery and printing	8,224 10
19.	Other expenses	55,998 00
		1,180,521 16

E. & O. E.

Moncton, N.B.

S. L. SHANNON,
Comptroller.

No. 5.—INTERCOLONIAL RAILWAY.

Conducting Transportation, 9 Months ended March 31, 1907.

			$ cts.
No. 20.	Superintendence		84,801 41
21.	Engine and roundhouse men		604,113 08
22.	Fuel for locomotives		1,143,036 23
23	Water supply for locomotives		47,518 88
24.	Oil, tallow and waste for locomotives		42,272 07
25.	Other supplies for locomotives		9,638 69
26	Train service		503,763 15
27.	Train supplies and expenses		129,547 89
28.	Switchmen, flagmen and watchmen		166,260 92
29.	Telegraph expenses		129,028 70
30.	Station service		425,566 75
31.	Station supplies		78,718 44
35.	Loss and damage		84,354 35
36.	Injuries to persons		2,447 37
37.	Clearing wrecks		15,619 36
38.	Operating marine equipment		30,395 98
39.	Advertising		31,673 81
40.	Outside agencies		44,231 86
42.	Stock yards and elevators		5,069 67
44.	Rents of buildings and other property		1,488 78
45.	Stationery and printing		53,821 38
46.	Other expenses		25,729 22
	Total		3,659,097 99
	Less :—		
33.	Car service	$ 153,477 77	
34.	Hire of equipment	9,163 09	
43.	Rents for tracks, yards and terminals	11,232 30	
			173,873 16
			3,485,224 83

E. & O. E.

Moncton, N.B.

S. L. SHANNON,
Comptroller.

No. 6.—INTERCOLONIAL RAILWAY.

General Expenses, 9 Months ended March 31, 1907.

		$ cts.
No. 47.	Salaries of general officers	10,999 94
48.	Salaries of clerks and attendants	58,441 87
49.	General office expenses and supplies	15,377 95
50.	Insurance	7,842 53
51.	Law expenses	16,243 48
52.	Stationery and printing, general offices	12,258 66
53.	Other expenses	26,372 73
		147,537 16

E. & O. E.
Moncton, N.B.

S. L. SHANNON,
Comptroller.

No. 7.—INTERCOLONIAL RAILWAY.

Special Votes, 9 Months ended March 31, 1907.

	$ cts.
Rent of Grand Trunk Railway—Chaudière Curve to Chaudière and Ste. Rosalie to Montreal, including the Victoria Bridge and terminals in Montreal	105,000 00

E. & O. E.
Moncton, N.B.

S. L. SHANNON,
Comptroller.

No. 8.—INTERCOLONIAL RAILWAY.

General Stores Account, 9 Months ended March 31, 1907.

Dr.	$ cts.	$ cts.	Cr.	$ cts.	$ cts.
To Balance at June 30, 1906		1,493,723 83	By Issues during 9 months ended March 31, 1907	2,447,075 60	
Purchases during 9 months ended March 31, 1907	2,281,468 44		Sales material, fuel, &c	81,572 26	
Charges from other departments	102,190 73		Sales old material	92,717 32	
Labour, &c	84,714 08				2,621,365 18
Staff pay rolls (general office)	1,265 00		Balance—		
		2,469,638 25	Ordinary stores, including fuel	405,808 68	
			Roadway and bridge material	936,188 22	
					1,341,996 90
		3,963,362 08			3,963,362 08

E. & O. E.
Moncton, N.B.

S. L. SHANNON,
Comptroller.

No. 9.—INTERCOLONIAL RAILWAY.

General Balance, 9 Months ended March 31, 1907.

Dr.	$ cts.	$ cts.	Cr.	$ cts.	$ cts.
To Cash		452 93	By Dominion of Canada		2,027,802 06
Station agents		196,362 58	Unclaimed freight		749 95
General stores		1,341,996 90	Suspense		3,513 50
Rents		6,154 21	Freight in Transit Account		6,489 62
Claim Agent's Suspense Account		43,879 15	Grand Trunk Ry.—Track Suspense Account		33,320 34
Ice Stock Account		2,216 68			
Auditor's Suspense Account		13,850 60	By Individuals and Companies Ledger—		
Beaver Brook Accident Claims Account		2,500 00	Albert Manufacturing Co	0 08	
			Cape Breton Ry	12 09	
To Individuals and Companies Ledger—			Charlottetown Steam Navigation Co	0 11	
Acadia Coal Company	782 65		Chatham Railway	0 07	
Armour Car Lines	0 57		Canadian Ry. News Co	9 36	
American Locomotive Co	1,038 97		Department of Justice	1,000 00	
H. & A. Allan	4 50		Dubs & Co	98 63	
Allan Steamship Line	1,892 13		G. Demers	200 00	
Athol station	4 44		W. B. Dickson	200 00	
Amherst freight station	3 31		Dominion of Canada Guarantee and Accident Co.	3 56	
F. Atkinson	49 87		Elmsdale Co	1,190 18	
H. Atkinson	12 80		Employers' Liability Assurance Corporation	0 45	
Atlantic and Lake Superior Ry	7,888 72		Freight Claim Agent	359 71	
American Refrigerator Trans. Co	3 20		J. Fenderson & Co	223 50	
Ann Arbor Ry	2 00		General Baggage Agent	0 35	
Boston and Maine Ry	115 66		Grand Lake Lumber Co	624 00	
Ballston Terminal Railway	396 41		General Storekeeper	609 09	
Baltimore and Ohio Ry	22 82		J. B. & A. Ganlin	10 00	
Boston and Albany Ry	2 84		Guarantee Company of North America	31 60	
Baldwin Locomotive Works	181 10		H. Girard	13 50	
M. Beatty & Sons	1 14		J. B. Humphrey	0 75	
Geo. C. Brown	11 08		Mrs. B. Carr Harris	93 25	
J. C. Brown	15 00				
Boisdale station	7 80				
Bic station	22 00				
To Bloomfield Station	25 21		By I.C.Ry. Employees' Relief and Insurance Assn.	187 90	
Beersville Ry. of Coal Co	564 91		London Guarantee and Accident Co	1 92	
Buffalo Rochester and Pitts. Ry	1 54		I. Lord	400 00	
I. L. Burrill	90 23		Merchants Despatch Transportation Co	11 95	
Burlington, Cedar Rapids and N. Ry	1 60		McLean, Holt & Co	599 06	
Brockville, West Point and N. W. Ry	8 66		W. A. McKay & Co	363 00	
Buffalo and Susquehanna Ry	1 99		New Brunswick Telephone Co	76 02	
Burlington and Mis. River Ry	0 63		N. S. Fertilizer Co	426 61	
Bessemer and Lake Erie Ry	2 26		J. O'Shaughnessy	180 12	

Canadian Pacific Ry	17,587 17	
" (N.B. Div.)	3,580 17	
		21,167 34
" Rolling stock		22,446 90
F. E. Came		2,760 70
Canada Eastern Ry		17 42
Caraquet Ry		19,140 03
Canadian Express Co		25 68
Canadian Coals and Ry. Co		496 12
Central Vermont Ry		299 24
Canada Atlantic Ry		15 30
Cumberland Ry. and Coal Co		33 79
Chicago Great Western Ry		12 54
Canadian Northern Ry		14 46
Chicago, Rock Island and Pacific Ry		0 50
Cincinnati, Ham. and Dayton Ry		6 00
Cleveland, Cin., Chic. and St. Louis Ry		61 82
Chicago, Milwaukee and St. Paul Ry		11 58
Chicago and Northwestern Ry		2 72
S. Canard & Co		538 01
T. B. Calhoun		10 00
Canadian Bridge Co		159 96
T. R. Campbell		3 00
Campbellton ticket station		94 85
Campbellton freight station		25 00
H. J. Cameron		1,679 07
Coldbrook Rolling Mills		1,967 41
Coal Branch Station		65 84
T. Cook & Son		19 80
Chicago and Alton Ry		5 24
Cin., New Orleans and Texas P. Ry		1 63
Chicago, Burlington and Quincy Ry		4 49
Cudahy Refrigerator Line		2 88
Chicago and Eastern Illinois Ry		0 70
Cotton Belt Route		9 54
Cape Breton Electric Ry. Co		337 79
Central Ontario Ry		1 73
F. H. Charbonneau		3 00
Central Telephone Co		36 00
Chicago, Ind. and Louisville Ry		3 19
Chicago, Cin. and Louisville Ry		1 26
Chicago, Ind. and Southern Ry		0 76
To Central New England Ry		0 45
Colchester Coal and Ry. Co.		175 98
Dept. of Agriculture		1,520 28
Dominion Tar and Chemical Co		24 76
Dept. of Public Works		16,529 00
Dept. of Marine and Fisheries		179 30
Dept. of Militia and Defence		2,800 34
Dominion Atlantic Ry		10,385 47
Pictou Foundry Co		18 90
Portland Rolling Mills		0 01
Quebec Construction Co		51 44
Robb Engineering Co		1 50
Railway Passengers' Assurance Co		3 45
J. Simon		200 00
Savoie & Co		823 00
Transcontinental Ry. Commission		1 08
E. A. Williams		18 80
Wallace Stone Quarry Co		0 80
Alex. Watton		400 00
Dominion Lumber Co		182 00
		8,627 75
By Individuals and Companies Ledger Suspense Accounts :—		
P. E. Island Ry	29 47	
McLean, Holt & Co	43 00	
General Storekeeper	117 77	
Pictou Foundry Co	283 50	
Acadia Coal Co	45 70	
Fraserville Foundry	147 73	
Galena Oil Co	104 00	
H. J. Carson & Co	3,434 20	
Imperial Oil Co	32 05	
		4,237 42
By Traffic Ledger :—		
Atchison, Top and S. Fe Ry	826 38	
Boston and Maine Ry	3,823 37	
G. E. Beekman	6 10	
Canadian Northern Ry	996 63	
Canadian Pacific Ry	364 68	
Chic. Rock Island and P. Ry	500 62	
Chic., Burlington & Quincy Ry	131 75	
Chic. and Northwestern Ry	302 21	
Chic. Mil. and St. Paul Ry	366 80	
By Delaware and Hudson Ry	138 57	
Duluth, South Shore and Atlantic Ry	669 35	
Dominion Coal Co	13 78	
Erie Ry	0 40	
SS. *Electra*	7 20	
Eastern SS. Co	157 50	
Great Northern Ry. Line	337 75	
Halifax and Southwestern Ry	73 30	

No. 9—INTERCOLONIAL RAILWAY—*Continued.*

General Balance, 9 Months ending March, 31, 1907—*Continued.*

Dr.	$ cts.	$ cts.	Cr.	$ cts.	$ cts.
Dominion Coal Co.	8,151 91		King Bros.	200 00	
Dominion Iron and Steel Co.	4,613 36		Lake Shore and Michigan Southern Ry.	17 22	
Deleware and Hudson Ry.	139 83		Lotbinière and Mégantic Ry.	2 73	
Deleware, Lack. and Western Ry.	35 89		Maine Central Ry.	4,873 80	
Drummond County Ry.	7,199 87		Minn., St. Paul and S. S. Marie Ry.	570 23	
Dartmouth Station.	8,013 73		Minn. and St. Louis Ry.	11 97	
Derby Junction Station	231 04		Northern Pacific Ry.	575 24	
Dalhousie Station	19 69		New York Central and Hudson River Ry.	35 40	
Dominion Express Co.	277 15		New York, New Haven and Hartford Ry.	344 85	
Dept. of Interior	303 82		Pennsylvania Ry.	28 50	
Dominion Bridge Co.	186 90		Quebec Southern Ry.	38 45	
Dept. of Railways and Canals	2 22		Quebec Central Ry.	499 24	
Detroit and Mackinac Ry.	0 76		Newfoundland Ry.	223 20	
Detroit Southern Ry.	0 41		Wabash Ry.	401 29	
A. P. Dupuis	938 06		Wisconsin Central Lines	33 00	16,571 51
Detroit, Toledo and Trenton Ry.	2 40		By Car Service Ledger:—		
Denver and Rio Grande Ry.	0 66		Alabama and Great So. Ry.	1 00	
Elgin and Havelock Ry.	401 80		Bangor and Electric Ry.	1 50	
Erie Ry.	73 35		Buffalo and Susquehanna Ry.	5 50	
Engineering Contract Co.	518 68		Baltimore and Sparrows Pt. Ry.	1 75	
Eel River Station	32 61		Central Vermont Ry.	1 00	
Eureka Mills Station	13 56		Chicago Belt. Ry.	16 00	
Elgin Branch Ry.	726 10		Chicago Great Western Ry.	10 80	
Capt. J. A. Farquhar	9 60		Detroit and Mackinac Ry	0 25	
Forestdale Station	6 34		Doud Stock Car Co.	1 40	
A. Forbes	82 18		Grand Trunk Ry.	2,384 76	
Fraserville Foundry Co	121 38		Great Northern Ry. of Canada	18 00	
Flood & Co.	25 50		Huntingdon and Broad Top Mountain Ry.	1 25	
S. W. Fidler & H. W. Roome	405 83		Kansas City, Mexico and Orient Ry.	16 00	
Grand Trunk Ry.	9,796 91		Missouri Pacific Ry.	0 50	
Great Northern Ry. of Canada	44 72		Missouri, Kansas and Texas Ry.	0 50	
Grand Trunk Ry.—Suspense	98 75		Narragansett Pier Ry.	1 75	
O. Guerette & Son.	36 92		New Jersey and New York Ry.	0 25	
Gray & Lawrence Bros. Co.	6 75		Poughkeepsie and Eastern Railway.	0 90	
Gloucester Junction Station	78 87		Pecos Valley and Northeastern Ry.	0 50	
P. E. Gallant	173 36		Quincy, Omaha and Kansas City Ry	5 00	
Glengarry Station.	5 00		Susquehanna, Bloomsberg and Berwick Ry.	0 80	
Galena Oil Co.	201 00		St Joseph and Grand Island Ry.	4 00	
Great Northwestern Telegraph Co.	200 91		Susquehanna River and Western Ry.	0 50	
Charles Goodall & Son.	30 54		Texas and Pacific Ry.	0 50	
Galveston, Harrisburg and San. A. Ry.	1 55		Woodstock Ry.	1 00	
Halifax and Southwestern Ry.	9,183 26		White River Ry.	0 40	
Hampton and St Martin's Ry.	1,421 35				2,475 81

Hocking Valley Ry	1 03
Halifax Station Labor	1,500 00
M. J. Haney	97 31
Halifax Freigh Station	887 49
R. Hamilton	1,131 52
H. M. Hamilton	316 66
Halifax and Cape Breton Ry	1,151 42
L. R. Harrison	1,343 41
Inverness Ry. and Coal Co	14,034 49
Intercolonial Coal Mining Co	21 01
Interprovincial Navigation Co	195 90
Illinois Central Ry	1 45
Indiana, Illinois and Iowa Ry	2 24
Imperial Oil Co	32 05
Iona Station	72 71
To Isle Verte Station	25 00
Kent Northern Ry	7,327 76
Kent Junction Station	28 38
Kanawha and Michigan Ry	1 69
Willard Kitchen	33 10
Kansas City and Southern Ry	1 19
Kentucky and Indiana Bridge Ry	210 00
Lotbinière and Megantic Ry	36 19
Londonderry Iron and Mining Co	20,304 08
Lehigh Valley Ry	31 51
Louisiana and Western Ry	30
Louisville and Nashville Ry	11 55
Lake Shore and Michigan Southern Ry	95 45
Lake Erie and Western Railway	1 30
LeB. Drury Lockhart	45 50
Moncton and Buctouche Ry	512 36
Michigan Central Ry	24 84
Main Central Ry	96 46
Moncton Freight Station	20 00
Memrancook Station	7 54
Montreal Cotton and Wool Waste Co	23 40
Montmagny Light and Pulp Co	1,015 95
Thos. Malcolm	1,177 01
Midland Ry. of N. S	7 07
Micmac Mining Co	317 84
Minudie Coal Co	2,592 70
Missouri Pacific Ry	51 08
Minn., St. Paul and S. S. Marie Ry	8 30
Missouri, Kansas and Texas Ry	2 61
Maritime Coal Ry. and Power Co	0 01
Musgrave and Co	9 72
Mathie Ellis Co	26 28
Maritime Engineering Co	2 40
Missouri River Desp. Trans. Co	2 34
Morris Co. Refrigerator Line	3 38

By Advance :—		
W. L. Crighton	0 20	0 20

No. 9.—INTERCOLONIAL RAILWAY—*Continued.*

General Balance, 9 Months ended March 31, 1907—*Continued.*

Dr.	$ cts.	$ cts.	Cr.	$ cts.	$ cts.
H. J. McManus	56 00				
A. R. McDonald	2 76				
J. J. McLeod	644 16				
G. McDougall & Co	1,466 00				
McPhee Automatic Signal Co.	46 30				
E. D. McGrath	11 40				
New Brunswick Coal and Ry. Co.	43,306 12				
New York Central and Hudson River Ry.	381 45				
National Despatch Line	281 58				
Newfoundland Ry.	1,716 56				
New York, New Haven and H. Ry.	66 83				
North American Trans. Co	2,347 33				
New York, Chicago and St. Louis Ry.	10 85				
Nova Scotia Steel and Coal Co.	2,988 67				
New Brunswick and P. E. Island Ry.	2,995 79				
Northern Pacific Ry.	3 14				
Captain Newcombe	83 98				
J. Norris & Co.	22 22				
Nash's Creek Station	6 25				
New Glasgow Station	633 90				
New Castle Station	102 75				
Nappan Station	40 00				
Nicolet Station	39 53				
Nauwigewauk Station	3 00				
National Labour Congress	446 40				
Post Office Dept.	3,962 86				
Prince Edward Island Ry.	680 82				
Pictou Station Labour	200 00				
Pullman Co.	8 67				
Pennsylvania Ry.	105 49				
Price Bros.	1,336 02				
Purcell and Fallon	11,672 77				
Pitts., Cin., Chicago and St. Louis Ry.	14 37				
Pennsylvania Co.	53 93				
Pere Marquette Ry.	28 18				
Philadelphia and Reading Ry.	3 83				
H. M. Price & Co.	305 43				
Phœnix Bridge Co.	9 77				
I. N. Pouliont	352 20				
Pickford and Black	163 16				
Polson Iron Works	273 25				
D. Pottinger	7 45				
Peoria and Eastern Ry.	9 75				

Quebec Central Ry	4,453 55
Quebec Southern Ry. (New Acct.)	2,537 76
" " (Old Acct.)	27,144 93
Rhodes Curry & Co	2,971 91
Rome, Watertown and Ogdensburg Ry	7 61
Rutland Ry	19 38
Rathbun Co	1 50
William Roche	91 22
Chas. D. Roddock	130 00
Royal Visit	9,264 25
Ryan & McDonnell	3,736 29
Rockingham Station	27 47
Red Pine Station	29 00
River du Loup ticket station	16 00
" freight "	136 82
Remittance destroyed	788 81
J. Richards & Son	116 24
Wallace Ross	33 70
T. Richard	1,500 00
F. A. Ronman & Co	0 50
Red Cross SS Line	5 87
SS. *Mode*	268 14
Swift Refrigerator Line	30 74
Steamer *Rashola*	18 50
Standard Car Truck Co	465 30
St. Hyacinthe Station	8,879 05
SS *Verde*	50 78
SS. *Lake Ontario*	17 04
St. Francois Bridge Co	49 59
Shediac Station	34 70
Sackville Station	10 17
St. John Station	3,096 46
St. Alexandre Station	25 90
Ste. Louise Station	0 66
Sydney Cement Co	808 55
Springhill and Parrsboro Ry	3,161 99
St. Arsene Station	107 12
St. Luce Station	80 00
Schooner *Mary Jane*	71 30
R. A. & J. Stewart	41 39
St. John Street Ry	31 00
St. Anaclet Station	11 00
Salisbury and Harvey Ry	138 81
Southern Ry	0 71
Shedden Co	1 75
St. Lawrence and Adirondack Ry	19 17
St. Louis and San Francisco	1 16
St. Louis, Iron Mountain and So. Ry	19 23
San Pedro, Los Angeles and Salt Lake Ry	16 00
St. Louis South Western Ry	9 82

No. 9.—INTERCOLONIAL RAILWAY—*Continued.*

General Balance, 9 Months ended March 31, 1907—*Continued*

Dr.	$ cts.	$ cts.	Cr.	$ cts.	$ cts.
V. J. Sullivan	10 00				
Temiscouata Ry	193 52				
Texas, Pacific Ry	1 61				
Tobique Valley Ry	2,739 25				
Trois Pistoles Pulp and Paper Co	73 82				
Trois Pistoles Station	97 37				
Town of Dartmouth	32,000 00				
F. Tapley	10 00				
Town of Truro	360 00				
Town of Nicolet	83 35				
Toledo, Peoria and Western Ry	0 35				
Vandalia Line	9 75				
Uncurrent and failed bank notes	82 20				
Valley Station	6 65				
Union Bearing Co	928 18				
Vicksburg Southern and Pacific Ry	0 63				
Union Pacific Ry	1 23				
Wabash Ry	206 81				
Washburn Co	48 00				
Western Union Telegraph Co	295 52				
A. N. Whitman & Son	150 00				
Wentworth Station	33 24				
Western Counties Ry.—General	$15,893 35				
" " " Traffic	64 57				
	15,957 92				
Welford Station	55 00				
E. A. Wallberg	473 68				
J. D. Walker	21 75				
Western Maryland Ry	3 50				
Wisconsin Central Ry	0 77				
York and Carleton Ry	8,305 13				
To Individuals and Companies Ledger, Suspense Accts.—		434,451 83			
I. C. Ry. Employes' Relief and Insurance Association	0 37				
Dominion Bridge Co	0 30				
Halifax and Southwestern Ry	128 19				
Dominion Atlantic Ry	41 88				
Windsor Branch Ry	2 18				
E. A. Wallberg	1 10				
Canadian Pacific Ry	47 89				
		221 91			

Traffic Ledger—		
H. & A. Allan	2,691 72	
Allan Bros. & Co.	1,648 12	
SS. *Arcadia*	1 60	
Acadia Coal Co	45 72	
To Beaver Line Steamers	1,156 13	
Boston, Halifax and P. E. Island SS. Co.	29 23	
Canada Atlantic and Plant SS. Co.	218 79	
Cape Breton Ry	9 30	
Charlottetown Steam Nav. Co	91 76	
Canada Coals and Ry. Co	2,434 52	
Delaware, Lack. and Western Ry	6 79	
Dominion S. S. Co	56 08	
Dept. of Marine and Fisheries	1 89	
Dominion Atlantic Ry	6,079 43	
Exchange account	461 69	
Grand Trunk Ry	42,963 87	
Great Northern Ry. of Canada	124 74	
Hatheway Line	11 10	
Interprovincial Navigation Co	46 30	
Intercolonial Coal Mining Co.	1,423 71	
Imperial Coal Co	124 54	
Kingston and Pembroke Ry	4 38	
William Miller	258 43	
R. C. W. McQuaig	522 78	
National Lines of Mexico	7 35	
Pere Marquete Ry	1 58	
Pittsburg and Lake Erie Ry	1 06	
Salvation Army	19 67	
St. Lawrence Steamboat Co.	255 33	
Temiscouata Ry	255 65	
World Travel Co	51 30	
		61,004 56
To Car Service Ledger:—		
Atlanta and Birmingham Air Line	1 00	
Addyston and Ohio River Ry	1 95	
Atlanta and West Point Ry	2 70	
Boston and Maine Ry	2 00	
Bessemer and Lake Erie Ry	0 10	
Chicago, Indiana and Southern Ry	23 60	
Colorado and Southern Ry	6 50	
Cleveland, Cinn., Chic. and St. Louis Ry	4 41	
Cincinnati, New Orleans and T. P. Ry	1 00	
Chicago, Indiana and Eastern Ry	1 60	
Canadian Northern Ry.	110 20	
Cincinnati, Hamilton and Dayton Ry.	0 20	
Dominion Tar and Chemical Co	154 00	
Dublin and Southwestern Ry.	0 75	
Erie Ry	0 75	
Fonda, Johnstown and G. Ry	0 50	

No. 9.—INTERCOLONIAL RAILWAY—*Continued.*

General Balance, 9 Months ended March 31, 1907—*Continued.*

Dr.	$ cts.	$ cts.	Cr.	$ cts.	$ cts.
Genessee and Wyoming Ry	4 00				
Great Northern Ry. Line	7 75				
Green Bay and Western Ry	2 00				
Indiana Harbor Ry	2 00				
Lehigh and New England Ry	0 20				
Moshassuck Valley Ry	8 25				
Mobile and Ohio Ry	36 25				
Mississippi River and Bonne Terre Ry	2 00				
Missouri Coal Belt Ry	0 50				
Marquette and Southeastern Ry	1 75				
New York and Pennsylvania Ry	2 50				
Nashville, Chatt. and St. Louis Ry	44 00				
New York, Phil. and Norfolk Ry	4 75				
New Orleans and Northeastern Ry	20 75				
Ohio Central Lines	2 50				
Pere Marquette Ry	1 00				
Portland and Rumford Falls Ry	57 05				
Quebec and Lake St. John Ry	4 40				
South Manchester Ry	0 60				
Southern Ry	2 50				
Toledo and Western Ry	1 40				
Toledo Ry. and Terminal Co	9 35				
Tonapah and Goldfield Ry	1 25				
Washington County Ry	12 50				
Williamsport and North Branch Ry	0 25				
		540 76			
Advances :—					
W. J. Hughes	30 50				
J. W. C. McConnell	50 00				
Geo. Skeffington	25 55				
A. Galipeault	50 00				
		156 05			
		2,103,788 16			2,103,788 16

E. & O. E.,
Moncton, N.B.

S. L. SHANNON,
Comptroller.

No. 10.—INTERCOLONIAL RAILWAY.

STATEMENT of Averages for nine months ending March 31, 1907.

Mileage of railway	1,448·62
Engine mileage	6,810,418
Total train mileage	5,069,575
Total car mileage	61,236,603
Ratio of earnings to gross earnings : —	Per cent.
Passenger	31·25
Freight	64·54
Mail and express	3·76
Miscellaneous	·45
Gross earnings per mile of railway ... Dollars	4,313 29
" engine mile railway ... Cents	91·75
" train mile ... Dollars	1 23
" car mile ... Cents	10·20
Ratio of expenses to gross earnings :—	Per cent.
Maintenance of ways and structures	17·80
Maintenance of equipment	18·89
Conducting transportation	55·78
General expenses	2·36
Rental of leased lines	1 68

Details of Expenses per Train mileages.

Maintenance of ways and structures :—		
No. 1.	Repairs of roadway ... Cents	14·29
2.	Renewals of rails "	·75
3.	Renewal of ties "	2·92
4.	Repairs and renewal of bridges and culverts "	1·24
5.	Repairs and renewal of fences, road crossings, &c "	·43
6.	Repairs and renewals of buildings and fixtures "	1·98
7.	Repairs and renewals of docks and wharfs "	·24
8.	Repairs and renewals of telegraph "	·02
9.	Stationery and printing "	·06
10.	Other expenses "	·07
11.	*Re* superintendence "	1·31
12.	Repairs and renewals of locomotives "	9·39
13.	Repairs and renewals of passenger cars "	3·29
14.	" " freight cars "	6·46
15.	" " work cars "	·27
16.	" " marine equipment "	·17
17.	" " shop, machinery and tools "	1·12
18.	Stationery and printing "	·16
19.	Other expenses "	1·10
Conducting transportation :—		
No. 20.	Superintendence "	1·67
21.	Engine and roundhousemen "	11·92
22.	Fuel for locomotives "	22·55
23.	Water supply for locomotives "	·94
24.	Oil, tallow and waste for locomotives "	·83
25.	Other supplies for locomotives "	·19
26.	Train service "	9·94
27.	Train supplies and expenses "	2·56
28.	Switchmen, flagmen and watchmen "	3·28
29.	Telegraph expenses "	2·55
30.	Station service "	8.39
31.	Station supplies "	1·55
33.	Car per diem and mileage balance (credit) "	3·03
34.	Hire of equipment-balance "	·18
35.	Loss and damage "	1·66
36.	Injuries to persons "	·05
37.	Clearing wrecks "	·31
38.	Operating marine equipment "	·60
39.	Advertising "	·62
40.	Outside agencies "	·87
42.	Stock yards and elevators "	·10
43.	Rents for tracks, yards and terminals (credit) "	·22
44.	Rents of buildings and other properties "	·03

STATEMENT of Averages for nine months ending March 31, 1907—*Concluded.*

Details of Expenses per Train Mileages—Concluded.		
Conducting transportation :—		
No. 45. Stationery and printing	Cents	1·06
46. Other expenses	"	·51
47. Salaries of general officers	"	·22
48. Salaries of clerks and attendants	"	1·15
49. General office expenses and supplies	"	·30
50. Insurance	"	·16
51. Law expenses	"	·32
52. Stationery and printing (general offices)	"	·24
53. Other expenses	"	·52
Expenses per mile of railway :—		
Maintenance of ways and structure	Dollars	767 65
Maintenance of equipment	"	814 93
Conducting transportation	"	2,405 89
General expenses	"	101 85
Rental of leased lines	"	72 48
Expenses per train mile :—		
Maintenance of way and structure	Cents	21·94
Maintenance of equipment	"	23·29
Conducting transportation	"	68·75
General expenses	"	2·91
Rental of leased lines	"	2·07
		118·96

E. & O. E.
MONCTON, N.B.

S. L. SHANNON,
Comptroller.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE GENERAL MANAGER,
MONCTON, N.B., July 8, 1907.

M. J. BUTLER, Esq., C.E.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

DEAR MR BUTLER,—Herewith I send you the following statements in connection with the transactions of the last fiscal year :—

Statement of receipts.
Passenger statement.
Freight statement.
Descriptive statement of freight transported.
Comparative statement of principal freight carried.
Statement showing quantity of certain articles of freight carried.
Statement of coal shipped.

The statement of ocean borne freight traffic and the statement of ocean borne passenger traffic will follow in the course of a few days.

Yours very truly,

D. POTTINGER.

INTERCOLONIAL RAILWAY.

Statement of Receipts.

Months.	Passenger Traffic.	Freight Traffic.	Mails and Sundries.	Total.
1906.	$ cts.	$ cts.	$ cts.	$ cts.
July	293,790 24	433,971 79	32,616 36	760,378 39
August	320,876 32	455,258 03	28,013 55	804,147 90
September	296,864 95	436,981 87	29,050 01	762,896 83
October	232,419 78	499,401 26	30,436 83	762,257 87
November	171,014 43	489,697 97	30,741 42	691,453 82
December	178,437 97	452,639 89	30,101 10	661,178 96
1907.				
January	154,881 00	415,671 30	28,819 00	599,371 30
February	125,025 02	357,384 03	25,673 57	508,082 62
March	179,129 17	491,738 86	27,765 28	698,543 31
1906-7	1,952,438 88	4,032,745 00	263,127 12	6,248,311 00
1905-6	1,707,723 02	3,634,443 77	243,988 42	5,586,155 21

J. R. Bruce,
Traffic Auditor.

S. L. SHANNON,
Comptroller and Treasurer.

INTERCOLONIAL RAILWAY.

Passenger Statement.

Months.	Local.		Through.		Total.	
	Number.	Mileage.	Number.	Mileage.	Number.	Mileage.
1906.						
July	279,823	13,015,750	28,479	4,461,274	308,302	17,476,844
August	288,371	12,215,523	33,666	5,876,587	322,037	18,092,110
September	268,409	12,775,683	28,367	4,950,991	296,776	17,726,674
October	201,757	8,770,717	27,617	4,293,425	229,374	13,064,142
November	173,724	5,833,231	17,253	3,026,539	190,977	8,859,770
December	188,716	7,219,203	17,611	3,550,368	206,327	10,769,571
1907.						
January	153,578	5,164,281	15,066	3,142,428	168,644	8,306,709
February	131,338	4,235,801	8,253	2,329,724	139,591	6,565,525
March	167,410	5,590,820	15,409	5,424,021	182,819	11,014,841
1906-7	1,853,126	74,820,829	191,721	37,055,357	2,044,847	111,876,186
1905-6	1,911,106	69,450,692	184,453	30,727,240	2,095,559	100,177,932

J. R. Bruce,
Traffic Auditor.

S. L. SHANNON,
Comptroller and Treasurer.

INTERCOLONIAL RAILWAY.

Freight Statement.

Months.	Local.		Through.		Total.	
	Tons.	Mileage.	Tons.	Mileage.	Tons.	Mileage.
1906.						
July	220,581	38,282,143	65,992	30,443,404	286,573	68,725,547
August	216,824	41,293,164	68,754	33,809,089	285,578	75,102,253
September	211,551	37,014,578	67,725	33,152,123	279,276	70,166,701
October	242,258	39,933,903	74,438	40,420,172	316,696	80,354,075
November	243,748	38,515,269	78,532	42,705,679	322,280	81,220,948
December	215,827	42,689,449	74,495	42,317,169	290,322	85,006,618
1907.						
January	238,017	48,420,149	41,179	23,024,796	279,196	71,444,945
February	179,313	36,187,765	52,986	27,203,410	232,299	63,391,115
March	228,750	44,239,649	85,103	43,563,389	313,853	87,803,038
1906-7	1,996,869	366,576,009	609,204	316,639,231	2,606,073	683,215,240
1905-6	1,747,631	332,276,715	540,342	285,279,193	2,287,973	617,555,968

J. R. Bruce,
Traffic Auditor.

S. L. SHANNON,
Comptroller and Treasurer.

INTERCOLONIAL RAILWAY.

Descriptive Statement of Freight Transported during the Nine Months ended March 31, 1907.

	Number.	Tons.
Barrels flour	1,531,140	153,114
Bushels grain	2,231,864	49,160
Live stock	97,381	15,815
Sup. feet lumber	452,602,703	627,743
Fuel		703,043
Manufactured goods		658,850
All other articles		398,348
Total		2,606,073

J. R. Bruce,
Traffic Auditor.

S. L. SHANNON,
Comptroller and Treasurer.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

Comparative Statement of Principal Freight carried over the Intercolonial Railway.

Description.		Nine Months ended June 30, 1906.		Nine Months ended March 31, 1907.	
		Quantity.	Tons.	Quantity.	Tons.
Live Stock.					
Calves	No.	1,470	196	1,523	203
Horses	"	5,658	4,068	4,805	4,120
Cattle	"	13,023	6,657	13,359	7,125
Pigs	"	2,347	294	2,491	302
Sheep	"	72,435	3,915	75,203	4,065
Products of the Forest.					
Lumber	Sup. ft.	201,423,640	250,655	260,048,360	330,640
Logs	"	7,173,651	11,685	7,457,350	12,425
Timber, ship			3,389		3,620
Pulpwood			151,647		163,623
Pit props			20,617		21,617
Telegraph poles			2,479		3,122
Railway sleepers			28,483		29,496
Tan bark	Cords.	12,010	12,639	12,830	13,102
Firewood	"	38,241	66,303	38,510	67,563
Shingles	M.	437,819	51,318	468,077	52,593
Clapboards, laths, pillings	"	30,425	9,347	33,942	10,607
Hemlock extract	Brl.	4,676	1,161	5,512	1,382
Mineral Products.					
Coal			483,286		*635,480
Ore			50,023		51,607
Stone			99,199		106,840
Lime and cement			24,017		25,258
Brick			24,197		24,982
Sand			11,708		12,642
Iron, copper, bolts, scrap, castings			277,580		281,891
Agricultural Products.					
Flour	Brl.	1,171,690	117,169	1,220,350	122,035
Grain	"	2,270,400	49,519	2,231,864	49,160
Other mill products			28,449		31,079
Potatoes			19,045		14,268
All other vegetables			4,444		4,360
Butter and cheese			9,002		9,240
Eggs			1,753		1,886
Hay and straw			48,255		32,175
Apples			6,313		6,412
Products of Fisheries.					
Fish, salt			7,556		9,010
" fresh			7,948		9,502
" dried			2,422		2,466
" canned			2,859		3,650
Oysters	Brl.		1,566		1,352
Clams	"		2,118		3,650

*Includes coal shipped for use of Intercolonial Railway, since October, 1906, the charges on which are included in earnings. Previous to October, 1906, coal for use of Intercolonial Railway was carried as railway freight without charges.

INTERCOLONIAL RAILWAY.

COMPARATIVE STATEMENT OF PRINCIPAL FREIGHT, &c.—*Continued.*

Description.	Nine Months ended June 30, 1906.		Nine Months ended March 31, 1907.	
	Quantity.	Tons.	Quantity.	Tons.
Miscellaneous.				
Molasses		9,067		9,260
Sugar		37,180		41,092
Pork, salt		1,999		2,122
" fresh		2,334		2,486
Beef and other meats, salt		3,330		3,590
" " fresh		4,197		4,480
Hides and skins		4,553		4,893
Leather		6,942		7,223
All other articles		315,090		366,377
Total		2,287,973		2,606,073

J. R. BRUCE,
Traffic Auditor.

INTERCOLONIAL RAILWAY.

STATEMENT showing quantities of undermentioned articles carried over the I. C. R. during nine months ended March 31, 1907.

Articles.	Via St. John.	Via Ste. Rosalie.	Via Montreal.	To Local Stations.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
Raw sugar, west bound	Nil.	Nil.	394	14,671	15,065
Refined sugar, west bound	2,374	1,998	5,898	13,927	24,197
European freight, west bound	228	1,124	10,602	23,794	35,748
" east bound	208	260	5,320	* 86,683	92,471
Grain for shipment, east bound	Nil.	Nil.	Nil.	Nil.	Nil.
Fresh fish	3,712	320	2,882	7,400	14,314
Salt "	416	307	3,156	6,348	10,227
Coal from mines	3,252	1,737	2,808	624,833	632,630

* Includes 65,104 tons deals.

SESSIONAL PAPER No. 20

INTERCOLONIAL RAILWAY.

STATEMENT of coal shipped from mines over I.C.R. during nine month ending March 31, 1907.

From	For the West.			For Local Stations.	Total.
	Via St. John.	Via Ste. Rosalie.	Via Montreal.		
	Tons.	Tons.	Tons.	Tons.	Tons.
Albion				47,896	47,896
Stellarton	48	1,704	473	246,322	248,547
Westville				23,840	23,840
New Glasgow	3,204			61,167	64,371
Point Tupper			1,137	42,897	44,034
North Sydney			1,113	24,723	25,836
Sydney				5,770	5,770
Springhill Junction		33	85	86,242	86,360
Maccan				68,935	68,935
Norton				15,544	15,544
Adamsville				1,497	1,497
	3,252	1,737	2,808	624,833	632,630

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE SUPERINTENDENT OF MOTIVE POWER,
MONCTON, N.B., June 10, 1907.

SIR,—I have the honour to submit herewith the annual report of the operations of the motive power department for the nine months from July 1, 1906, to March 31, 1907.

I might add that the general condition of the rolling stock is good, with the exception of cars and locomotives condemned as shown in the attached report.

I am, sir,
Your obedient servant,
G. R. JOUGHINS,
Supt. of Motive Power, W.U.A.

Mr. D. POTTINGER,
General Manager, Government Railways,
Moncton, N.B.

INTERCOLONIAL RAILWAY.

OFFICE OF THE MECHANICAL ACCOUNTANT,
MONCTON, N.B., June 5, 1907.

SIR,—I beg to submit the following report of the operations of the mechanical department for the nine months ended March 31, 1907:—

A—Statement showing the number of locomotives and the various classes of cars.

B—Statement showing the mileage made and the coal, oil and waste consumed by locomotives.

Also a summary of the principal work done in the locomotive and car shops at Moncton, and in the shops at Richmond and River du Loup.

During the year the following rolling stock was purchased on capital and on revenue accounts:—

On Capital—To increase the Equipment—

20 locomotives—consolidation type.
3 locomotives—switching.
115 Hopper cars—15 tons capacity.

On Revenue—To replace smaller type—

2 locomotives—switching.

The following cars were rebuilt in the shops at Moncton:—

9 box.
11 platform.
1 oil tank.
2 coal—20 tons.

50 platform cars were fitted with racks for carrying pulp wood.

211 60,000 lb. box cars were fitted with end doors for loading rails, making 579 cars in all fitted in the shops to the end of March.

The work of fitting side ladders to box cars was begun this year and 910 cars were fitted to the end of March.

The engine and boilers for three steam motor cars were begun in the Moncton shops and were well advanced at the end of March.

In consequence of the destruction of the car repair shops by fire at Moncton the work of repairing freight cars has been carried on with much difficulty as the work had to be done almost altogether out of doors.

Notwithstanding this the car repair work has been well kept up and the rolling stock generally has been maintained in efficient condition.

I have the honour to be, sir,

Your obedient servant,

J. J. WALKER,
Mechanical Accountant.

G. R. JOUGHINS, ESQ.,
Superintendent of Motive Power,
Moncton, N.B.

INTERCOLONIAL RAILWAY.

STATEMENT showing the Number of Locomotives and the Various Classes of Cars on the Line on July 1, 1906, and March 31, 1907.

	Locomotives.	First Class Sleeping Cars.	Second Class Sleeping Cars.	Parlour Cars.	Dining Cars.	First Class Passenger Cars.	Second Class Passenger Cars.	Postal Smoking Cars.	Express and Baggage Cars.	Air Brake Instruction Cars.	Box Cars.	Refrigerator Cars.	Platform Cars.	Pulpwood Cars.	Oil Tank Cars.	Hopper Cars.	Coal Cars (Gondolas).	Coal Cars (20 ton).	Stock Cars.	Auxiliary and Tool Cars.	Convertible Dump Cars.	Vans.	Total Cars.	Snow Ploughs.	Wing Ploughs.	Flanges.	Rotary Steam Ploughs.	Double Track Ploughs.	Total Ploughs and Flanges.	Steam Cranes.	Ballast Plough Cars.
On hand serviceable July 1, 1906	341	40	38	9	8	131	95	34	58	1	5,941	104	2,788	..	25	919	17	462	114	21	130	117	11,052	53	20	25	2	2	102	8	2
Condemned July 1, 1906	6	1	2	..	1	6	2	2	2	..	55	5	42	..	..	80	..	9	9	..	....	2	218	..	..	..	..	..	..	..	..
Total equipment July 1, 1906	347	41	40	9	9	137	97	36	60	1	5,996	109	2,830	..	25	999	17	471	123	21	130	119	11,270	53	20	25	2	2	102	8	2
Received to March 31 on capital account	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	115	..	..	..	..	..	..	115	..	..	..	..	..	..	..	..
Changed from platform to pulpwood	..	..	..	..	..	..	..	..	..	..	..	..	50	50	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	370	41	40	9	9	137	97	36	60	1	5,996	109	2,780	50	25	1,114	17	471	123	21	130	119	11,385	53	20	25	2	2	102	8	2
Condemned July 1, 1906	6	1	2	..	1	6	2	2	2	..	55	5	42	..	..	80	..	9	9	..	....	2	218	..	..	..	..	..	..	..	..
Condemned 9 months to March 31, 1907	2	..	..	..	..	..	2	1	1	..	48	....	35	..	1	45	1	4	....	..	....	6	111	..	..	..	..	..	..	..	..
	8	1	2	..	1	6	4	3	3	..	103	5	77	..	1	125	1	13	9	..	....	8	362	..	..	..	..	..	..	..	..
Replaced 9 months to March 31, 1907	2	..	..	..	..	..	..	..	..	..	9	...	11	..	1	.....	..	2	....	..	....	....	23	..	..	..	..	..	..	..	..
To be replaced	6	1	2	..	1	6	4	3	3	..	94	5	66	..	..	125	1	11	9	..	.	8	339	..	..	..	..	..	..	..	..
Add serviceable and repairing	364	40	38	9	8	131	93	33	57	1	5,902	104	2,714	50	25	989	16	460	114	21	130	111	11,046	53	20	25	2	2	102	8	2
Total equipment March 31, 1907	370	41	40	9	9	137	97	36	60	1	5,996	109	2,780	50	25	1,114	17	471	123	21	130	119	11,385	53	20	25	2	2	102	8	2

J. J. WALKER,
Mechanical Accountant.

MONCTON, N.B., March 31, 1907.

INTERCOLONIAL RAILWAY.

STATEMENT of Mileage, and Coal, Oil and Waste consumed by the Locomotives for Nine Months ending March 31, 1907.

MONTHS.	CONSUMPTION.					AVERAGE CONSUMPTION PER 100 MILES.			
	Locomotive Mileage.	Tons of Coal.	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Waste.	Pounds of Coal.	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Waste.
1906.									
July	788,459	34,153	13,680	32,583	19,471	9,703	1·73	4·13	2·47
August	799,849	35,037	13,384	33,572	17,061	9,812	1·67	4·20	2·13
September	700,230	32,384	11,523	28,781	18,251	10,359	1·65	4·11	2·61
October	717,344	34,643	11,291	27,878	20,724	10,818	1·57	3·89	2·89
November	695,910	34,793	11,449	27,255	19,264	11,199	1·65	3·92	2·77
December	721,137	39,610	12,891	29,143	18,398	12,304	1·79	4·04	2·55
1907.									
January	728,712	41,988	12,803	29,007	19,841	12,907	1·76	3·98	2·72
February	638,113	36,727	11,030	25,099	23,070	12,892	1·73	3·93	3·62
March	763,711	42,773	12,039	29,320	18,385	12,545	1·58	3·84	2·41
	6,553,465	332,108	110,090	262,638	174,465	11,352	1·68	4·01	2·66

J. J. WALKER,
Mechanical Accountant.

MONCTON, N.B., March 31, 1907.

The following work was done in the shops at Moncton:—

Locomotive Shops—

79 locomotives received general, 17 heavy, 10 light and 15 specific repairs.
2 new boilers, 1 new fire box, 1 inside fire box and 2 new half side sheets were made.
60 fire boxes were patched and 31 received heavy repairs.
13 new smoke box doors and rings were made.
14 smoke boxes were repaired.
698 new tubes were put in locomotive boilers.
12,465 tubes were pieced and put in locomotive boilers.
113 boilers were tested.
73 new locomotive stacks were made and 20 repaired.
69 ash pans were repaired.
2 new ash pans were built.
24 front ends were made.
2 new locomotive steel cabs were made.
1 new steel tender was built and the capacity of 2 tenders was increased.
5 new steel tender frames were made and 53 received heavy repairs.
37 sterlingworth trucks were repaired.
18 new cylinders and half saddles were bored and machined.
9,400 stay bolts were put in fire boxes.
10 new wooden cabs were made.
119 wooden tenders were repaired.
6 wooden tender frames were made.
40 pilots were made and 35 were applied.
130 driving wheels were re-tired.
106 engine truck wheels were re-tired.
92 tender truck wheels were re-tired.
410 car wheels were re-tired.
614 driving tires were turned.
476 engine truck tires were turned.
302 tender truck tires were turned.
374 car tires were turned.
54 engine truck axles were turned and fitted.
48 tender truck axles were turned and fitted.
54 crank pins were made.
377,700 bolts were threaded.
5,393 studs were screwed.
116,072 nuts were tapped.
104 engines and tenders were painted.
3 tenders were painted separately.

Blacksmith Shop—

1,454,914 pounds iron forgings, including 414,128 bolts, were made.
295,693 pounds steel forgings were made.

Brass Foundry—

33,977 pounds brass castings were made.
14,162 pounds antimonial lead was made.
14,968 pounds babbit metal was made.
736 sets metallic piston rod packing was made.
1,200 sets valve stem packing was made.
214,187 pounds brass bearings were made.

Special work was done as follows:—

A large amount of work was done on store and shop orders for shops outside of Moncton and for other departments of the railway.

A large amount of work was done in repairing the plumbing at stations and dwelling houses along the line, and in connection with alterations to the general office building at Moncton.

Repairs were made to the ss. *Scotia* by men sent from Moncton shops.

150 rails were planed and drilled for the track department and a large amount of other work was done for that department.

4 engines were changed from Baldwin compound to simple cylinder.

All nettings on locomotives in the round houses along the line were examined and repaired.

20 water service boilers were tested.

1 new boiler was made for Halifax dredge and one for water service.

1 stationary boiler was repaired and tubed.

The following patterns were made and repaired :—

378 for iron malleable and steel castings.
90 for iron malleable and steel castings repaired.
440 for brass castings.
50 for brass castings repaired.

1 oil tank for saturating waste was made.

10 smoke jacks were built.

1 20-ft. smoke stack hood was made.

8 new coal buckets were made.

2 oil tanks on cars were repaired.

1 Buzz planer was repaired for the car shop.

6 planer vices were made.

The bulldozing machine was repaired.

1 hydraulic riveting machine was rebuilt.

The economizer and car shop boilers were thoroughly repaired and the car shop engine rebuilt.

1 new air hoist was made for Chaudière coal plant.

All the station stoves were overhauled and repaired from Moncton to St. Flavie, Moncton to St. John, Moncton to Sydney, Truro to Pictou, Truro to Halifax and over the branch lines.

The round-house and rest-house at Pirate harbour was fitted up with steam heating and plumbing.

A large number of locomotive and stationary boilers along the line were tested, reported on and repaired where required.

A large amount of work was done on the boilers and engines for the three steam motor cars being built in the shops.

In addition to the brass fixtures, mountings, &c., required for repairs and renewals at Moncton there was a large amount of brass turning and fitting done for outside shops and for other departments of the railway.

A boiler was fitted up and placed in the Pictou round-house for supplying heat and power.

The following new machines were received and set up :—

Brass moulding shop—

1 magnetic separator.

Brass turning shop—

1 metal saw.

Blacksmith shop—

1 Champion hammer.
2 new bolt furnaces.
1 3-inch acme bolt header.

Turning shop—

1 new shaper.
1 boring machine.
1 small planer.
1 nut facing machine.
6 lathes.
1 drilling machine.
1 centering machine.
1 small nut tapper.
1 large nut tapper.
1 large screwing machine.
2 small screwing machines.

Motion shop—

2 new lathes.
1 centering machine
1 drilling machine.

Car shops—

The following cars were rebuilt to replace a similar number condemned :—
9 box, 2 gondolas, 11 platform, 1 tank.

The following rolling stock received heavy repairs :—
1 official, 6 parlor, 15 sleeping, 55 first-class, 54 second-class 15 postal, 28 baggage, 196 freight, 1 refrigerator, 7 wing ploughs, 20 vans, 1 auxiliary, 4 flangers, 1 tool car, 2 gondolas.

The following rolling stock received light repairs :—
5 parlour, 1 dining, 14 sleeping, 53 first-class, 39 second-class, 22 postal, 24 baggage, 22 vans, 5,449 freight, 2 wing snow ploughs, 2 common snow ploughs, 1 flanger.

The following rolling stock received medium repairs :—
1 baggage, 3 refrigerator, 4 vans.

The following cars were scraped, filled and varnished :—
1 sleeping, 1 first-class, 1 colonist.

The following cars were painted and varnished :—
13 first-class, 13 second-class, 3 postal, 3 baggage, 13 vans.

The following cars were cleaned and varnished :—
48 first-class, 32 second-class, 5 dining, 13 colonist, 17 baggage, 11 postal, 6 parlor, 12 sleeping.

The following cars were painted :—
140 box, 2 auxiliary, 18 gondolas, 17 vans, 132 platform, 9 tank, 3 boxed flangers, 6 hoppers, 6 snow ploughs and 6 box car bodies for rest-houses were also printed.

In addition to the regular work of the shops special work was done as follows :—
177 freight cars and 2 snow ploughs were fitted with air brakes.
97 freight cars were fitted with M.C.B. couplers.
107 wooden freight car trucks were made and applied.
106 new sides were put in freight cars.
3,040 new chilled wheels were pressed on axles.
1,914 second-hand chilled wheels were pressed on axles.
134 new steel wheels were pressed on axles.

368 seeond-hand steel wheels were pressed on axles.
1,311 steel wheels were turned.
6,904 wheels were taken off axles.
736 new axles were turned.
2,907 seeond-hand axles were turned.
1,950 side ladders were made for box cars.
50 pulp wood ears were raeked and painted.

Material was got out for 211 end doors for box ears and was shipped to Sydney to be fitted to the ears at that plaee.

19 pulleys were made and set up.

Numerous artieles were made and repaired for this department at Moneton and for outside shops, and a great deal of work was done for other departments of the railway on store orders, eonsisting in part of the following:—Desk stools, stands, shop trueks, ear wheel sleds, stock sleds, drafting boards, benches for staging, baggage sleds, work beneh es, sleds and ladders for fire department, cloak rooms, tool benches, brake beams, train safes, outfit boxes, window frames, cushions, matresses, earts, bagage trueks, office eases, correspondenee cases, eabinets, file eases, hand-car wheels, foot boards, wood pumps, eases for advertising department, tool boxes, step ladders sashes, doors, elevator spouts, sign boards, desks, ehairs, stretchers and eross arms.

In addition to the lumber prepared for repairs, &e., there was 403,277 feet milled on store orders.

Four box ear tops were fitted up as rest houses, equipped with plumbing and upholstering, and shipped to the following stations:—Chaudiere, 2; Newcastle, 1; and Point Tupper, 1.

The following new machines were reeeived and set up:—1 double eut-off saw, 1 planer, 1 grinder, 1 saw grinder.

Water Service.—This serviee has been maintained in efficient condition over the whole line.

The following work was done in the shops at Richmond:—12 loeomotives reeeived heavy, 2 medium, and *9 speeifie repairs, 12 fire boxes were patched, 9 boilers were re-tubed; 27 boilers were tested; 12 sets driving tires were turned off; 70 engine truek tires were turned off, 674 tender and car truck tires were turned off, 2 new engine truek wheels were applied; 23 new tender truck wheels were applied; 1 half side sheet sand 3 pilots were made and applied; 13 engines and tenders were painted; 12,050 bolts were forged; 38,680 bolts were serewed; 2,180 studs were serewed; 1,069 passenger and 3,980 freight ears were turned out of the shops repaired during the year and a great deal of work was done for the maintenanee and traffie departments of this railway.

The offices at deep water terminus were fitted with steam heating from the grain elevator boilers.

The following new maehines were received and set up in the shops:—1 36-inch standard engine lathe; 1 24-ineh standard baek-geared erank shaper; 1 36-ineh upright drill press; 1 18-inch high speed lathe; 1 16-ineh lathe.

The following work was done in the shops at River du Loup :—

15 locomotives reeeived general, 3 medium and 12 speeifie repairs; 8 fire boxes were patched, 9 boilers were retubed, 43 boilers were tested, 128 driving tires were turned off, 74 engine truck tires were turned off, 212 tender truek tires were turned off, 15 engine truek wheels were re-tired, 10 tender truek wheels were re-tired, 1 new driving wheel was applied, 2 new engine truck wheels were applied, 1 main rod, 2 cabs, 21 pilots and 6 tender frames were made and put in serviee. 17 engines and tenders were painted, 5,057 bolts were forged, 22,652 bolts were serewed, 1,820 studs were serewed.

Light repairs were made to a number of freight and passenger cars during the year and a large amount of work was done for the Maintenance and Traffic Department of this railway.

The five coal cranes received heavy repairs.

The following new machines were received and set up in the shops :—
1 36-inch standard engine lathe, 1 24-inch standard back geared crank shaper, 1 18-inch slotting machine, 1 36-inch upright drill press, 1 20-inch single belt high speed lathe, 1 18-inch brass finishing lathe, 1 24-inch drill press.

7-8 EDWARD VII., A. 1908

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1906.							
July 1..	1.55	....	.....	.....	.....	....	Campbellton.....
" 6..	11.45	26	Express....	A. Coates, foreman shunter..	Wm. Furze.....	86	St. John.....
" 9..	10.30	83	" ...	Martin Daley.	A. H. Fryers.....	62	Moncton. .....
" 10..	21.10	132	" ..	E. W. Hennessy.....	A. McGrath.....	27	Waverly.....
" 8..	11.31	....	Shunter....	.....	E. Roy.....	301	Chaudière Junction...
" 10 .	24.05	37	Express....	J. Card.....	D. McQuarrie.....	289	Richards Crossing.....
" 14..	7.15	33	" ..	A. McLellan.....	G. Anderson.....	337	Nigadoo.....
" 16..	6.45	....	Work train	C. Audet.....	E. Thomas.....	308	Salmon Lake.....
" 16..	10.08	201	Express....	C. J. Rhodes.....	R. McDonald.....	164	Londonderry.....
" 20..	18.20	138	" ..	H. G. Thompson.....	J. J. Irvine.....	17	St. John.....
" 23..	7K	....	.....	.....	.....	....	Truro.....
" 24..	21.11	9	Express....	Geo. A. Chesley.....	C. Saunders.....	147	Windsor Jct.....
" 23..	9.30	16	" ..	Thos. Coffey.....	W. Carson.....	342	Roberts Crossing.....
Aug. 1..	23.25	....	Shunter....	W. A. Warman.....	T. McBeath.....	328	Derby Jct.....
" 3..	9K	....	" ..	D. S. Halliday.....	H. Cummings.....	287	Stellarton.....
" 9..	2.15	75	Freight....	T. Levesque.....	Geo. Begin.....	125	Montreal.....
" 11..	21K	....	Shunter....	.....	J. Quinn.....	176	Rivière du Loup.....
" 15..	.....	.....	.....	.....	.....	....	Lévis.....
" 16..	13.47	4	Express....	H. B. Gordon.....	F. Probert.....	58	Moncton.....
" 18..	13.55	....	Special....	R. Doyle.....	J. Kelly.....	145	Londonderry.....
" 18..	9K	....	"	N. Hetu.....	E. Roy.....	91	Pt. Lévis.....
" 22..	9.47	45	Express....	T. Dumond.....	F. Cloutier.....	93	Lévis.....
" 22..	18.20	152	" ..	J. Wilson.....	O. Gagnon.....	1	Trois Pistoles.....
" 22..	15.35	34	" ..	John Berry.....	J. Clarke.....	334	Windsor Jct.....
" 24..	7.35	152	" ..	M. Marchessault.....	Geo. Findlay.....	200	Point St. Charles.....
" 25..	24.10	Spl.	Freight....	N. Serois.....	P. Guay.....	300	Montmagny.....
" 31..	14.10	147	" ..	V. Roy.....	J. Dussault.....	183	St. Perpetue.....
Sept. 1..	8.25	39	" ..	D. Sweeney.....	A. Russell.....	305	Gloucester Jct.....
" 3..	6.45	78	" ..	J. F. Kelly.....	J. S. Campbell.....	66	Trenton.....
" 3..	22.20	....	.....	.....	C. P. R.	57	St. John.....
" 4..	8.20	150	Express....	L. Proulx.....	J. Quinn.....	74	St. Charles Jct.....
" 11..	20.30	134	" ..	W. H. Wilbur.....	W. J. Coffey.....	239	Penobsquis.....
" 14..	.....	.....	.....	.....	.....	....	Richmond.....
" 21..	23.30	85	Express....	Jas. Craigie.....	A. McLeod.....	153	Iona.....
" 24..	15.25	Spl.	Freight....	R. W. Achard.....	O. Gilker.....	297	Sayabec.....
" 29..	19K	84	Express....	E. Thompson.....	J. Brownell.....	62	Memramcook.....

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the year ended June 30, 1906.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
Paul Allard	Employee	While icing car No. 9582 fell from top of car	Both ankles injured	
Albert Coates	"	While coupling cars	Fingers smashed	
Anthony Landry	Neither	Walking on track and was struck by train.	Seriously injured.	
George Bainsfield	Passenger	Fell off moving train	Badly shaken up and scalp wound.	
J. H. Lawlor	Employee	While uncoupling moving cars fell between cars.	Fatal	Accidental.
Wm. F. Dobson	Neither	Struck by train while crossing over track in team.	Leg broken	
M. Ahern	Employee	Train struck hand car on which he was standing	Not serious	
C. Audet	"	Cars parted and then came together, throwing him against stove.	Head badly injured	
J. Mason	"	Tried to get shovel which had been left on track, it was struck and thrown against him.	Arm broken	
Frank S. Rogers	Passenger	Arm out of open window and was struck by something.	Arm broken in two places.	
M. A. McLean	Neither	Horse shied at cars near crossing and struck telegraph pole, man thrown out of carriage.	Not serious	
H. Bowers	"	Stealing a ride and fell off front of baggage car.	Badly cut about the head.	
S. Waugh	"	Struck by train while driving over public crossing.	Fatal	Accidental.
R. Howard	Employee	While shunting he slipped	Knee sprained	
W. J. Beniot	"	Fell off cars and was run over	Fatal	No inquest.
P. Sirois, E. Barras, Geo. Begin	"	Collision with cars foul of main line, engine and four cars left track.	Slight injuries	
C. Thibault	Neither	Attempted to cross in front of engine.	One leg taken off	
Honore Leberge	Neither	Found on track with arms and legs cut off.	Fatal	Found dead.
Patrick LeBlanc	Passenger	Fell off moving train	Left foot quite badly cut.	
Wm. Layton	Employee	Slipped while stepping off pilot of engine, foot run over.	Left foot badly injured.	
P. Boulanger	"	Fell between cars	Slight injuries	
Simon Viger	Neither	Struck by train while walking close to track.	Slight injuries	
Emile Rioux (boy)	"	Walking on track	Fatal	Accidental.
Hugh McCaskill	Employee	On track and was struck by train	Badly injured	
Alph. Guilmet	Neither	Walking close to track, struck by train.	Slightly injured	
P. Michaud	Employee	Collision with engine No. 98	Slightly injured.	
Fred. L'Hebreux	"	" " "	" "	
Josh. Ambert	"	While shunting	Head slightly injured.	
Leon Godin	"	While shunting slipped and fell	Shoulder dislocated.	
P. Gosbey	"	Foot caught while coupling	Foot badly hurt	
James Ruhlin	Neither	While lying on the track intoxicated, arm run over and other injuries.	Fatal	No inquest.
J. Quinn	Employee	Collision with freight train No. 50.	Fatal	Accidental.
Mrs. J. W. Colpitts	Passenger	Jumped off train while in motion.	Rather seriously injured.	
Chas. Farrell	Neither	Supposed to have committed suicide by allowing train to run over him.	Fatal	No inquest.
A. McLeod	Employee	Train left track at switch	Badly scalded	
E. Dupont	"	While coupling cars	Fingers jammed	
Wm. Belliveau (boy)	Neither	Driving over public crossing and was struck by train.	Fatal	No inquest.

INTERCOLONIAL

STATEMENT of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1906.							
Oct. 6..	11.00	Sub.	" ..	A. Bonneau.....	A. Halle.....	174	Pt. Lévis.....
" 8..	19.30	72	Mixed.....	E. L. Watts.....	F. G. Scott.....	114	Dalhousie Jct.....
" 9..	10.00	Spl.	Freight....	B. Sears.....	J. King.....	305	Gloucester Jct.....
" 10..	9.30	201	Express....	J. A. Gillespie.....	R. McDonald.....	164	Oil Siding, near Truro.
" 13..	17.25	Spl.	Freight....	C. A. Whooten.....	W. H. McKinnon.....	146	Wallace, N.S.
" 19..	23.25	"	" ..	E. Morin.....	F. Goddard.....	206	St. Leonard.....
" 20..	6.36	6	" ..	H. B. Gordon.....	F. Probert.....	241	St. John.....
" 23..	17.34	33	Express....	A. Lagace.....	L. Dutil.....	46	Ste. Rosalie.....
" 24..	18.10	Spl.	Freight....	L. Begin.....	A. Roberge.....	172	Laurier.....
" 26..	.....	....	.....	.....	.....	....	Spring Hill Jct.....
" 30..	11.15	....	.....	.....	J. Guay.....	196	Chaudiere Jct.....
" 30..	11K	Spl.	Freight....	E. K. O'Brien.....	L. Turpinat.....	158	Murrays Siding.....
Nov. 6..	16K	153	Express....	L. Proulx.....	D. Charrier.....	71	Paradis Mills, Lévis...
" 16..	18.15		Shunter....	W. Hinch.....	Geo. Currie.....	89	Halifax.....
" 18..	23.25	Spl.	Freight....	C. Audet.....	J. McNaughton.....	312	4 miles west St. Moise.
" 27..	4.35	33	Express....	P. E. Heine.....	J. C. Morton.....	333	Campbellton.....
" 30..	.....	....	.....	.....	.....	....	Grand Narrows.....
" 30..	.....	....	.....	.....	.....	....	Campbellton.....
Dec. 3..	18.50	37	Freight....	W. W. Irving.....	D. McQuarrie.....	313	Red Pine.....
" 4..	9.25	83	Express....	J. Hughes.....	A. Cook.....	115	Amherst.....
" 7..	23.50	26	" ..	A. Rainnie.....	John Ross.....	234	Rockingham.....
" 8..	8.10	....	Shunter....	J. Jackson.....	John Walsh.....	288	Halifax.....
" 10..	21.15	....	.....	.....	Alex. Grant.....	19	Mulgrave.....
" 12..	9.05	83	Express....	J. Coffey.....	J. Brownell.....	58	Frosty Hollow.....
" 14..	16.45	H&S W No. 1	Special....	Wm. Foster.....	Jas. McPherson.....	78	Halifax.....
" 16..	11.15	Spl.	Freight....	J. F. Lamkie.....	G. Miller.....	347	Newcastle.....
" 18..	9.00	152	Express....	M. Marchessault.....	Geo. Findlay.....	199	St. Hyacinthe.....
" 18..	7.00	Spl.	Freight....	S. A. McKay.....	J. S. Baxter.....	137	River John.....
" 23..	16.30	34	Express....	W. A. Mitchell.....	L. Dutil.....	74	St. Hyacinthe.....
" 25..	13.20	42	Freight....	J. B. Dubé.....	E. B. Price.....	299	Causapscal.....
Jan. 12..	.....	....	.....	.....	.....	....	Montmagny.....
" 20..	.....	....	.....	.....	.....	....	St. Jean Port Joli.....
" 22..	12.30	Spl.	Freight....	I. L. Barnhill.....	M. White.....	143	Londonderry.....
" 24..	9.10	76	" ..	A. E. Logan.....	J. Belleau.....	2	Mitchell.....
" 29..	14.30	19	Express....	N. Pushie.....	A. Henderson.....	6	Between Tracadie and Monastry.
" 29..	17.20	34	" ..	A. B. Vance.....	Jas. Clarke.....	237	Near Windsor Jct...
Feb. 1..	9.30	Spl.	Freight....	W. J. Ellis.....	B. Johnson.....	44	Valley .....

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the year ending June 30, 1906—*Continude.*

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
Oct. Veilleux..... O. Halle..... A. Bonneau.....	Employee....	Collision with G.T.R. pilot engine..	Fatal..... Slightly injured... "	Negligence of employees of I. C.R. and G.T.R.
M. J. Gallant.....	"	While shunting was struck by engine.	Badly bruised and scalp wound.	
L. Mclanson.....	"	Slipped out of van door while giving signals to driver.	Lip cut and wrist sprained.	
Alex. McLeod.....	Neither.....	Struck by train while removing piece of deal from off the track.	Fatal.....	Accidental.
T. C. Falconer.....	Employee.....	While coupling cars got caught between draw bars.	Hip bone fractured .	
V. R. Blanchard..... N. Henderson..... J. Lambert.....	"	Collision with Saliberté's freight special train.....	Arm broken and head cut. Slightly injured.	
John O'Neil.....	"	Crawling under car and train started.	Foot cut off.....	
Virginie Langelier.....	Neither.....	While walking on track was struck by train.	Fatal.....	Accidental.
Eddy Tweedle.....	Employee.....	Tube burst in fire box of engine...	Face burned.....	
P. A. Gillis.....	"	While loading baggage trunk fell on him.	Leg severely injured.	
B. Lemieux.....	"	While repairing cars, was run over by cars which were being shunted	Fatal.....	Open verdict.
John Taylor.....	"	Fell off car while shunting.....	Head cut and side injured.	
Thos. Lemieux.....	Neither.....	While walking on track was struck by train.	Two ribs broken and head injured.	
Thos. Brown.....	"	Found dead on track. Supposed to have been run over by shunter.	Fatal.....	No inquest.
F. H. Dubé.....	Employee.....	Train broke apart and cars collided.	Injured about face .	
Geo. McMaster.....	Neither.....	Struck by train on public crossing.	Seriously injured ...	
M. B. McDonald.....	Employee.....	Blown from draw bridge.....	Body not recovered.	
Harry Henry.....	Neither.....	Struck by engine while walking in Campbellton yard.	Foot injured.....	
D. McQuarrie.....	Employee.....	Engine ran off track and turned on her side.	Hands and face scaled.	
F. White.....	"	Struck by train while walking on on track.	Fatal.....	Accidental.
Benj. Smith.....	Passenger.....	Fell off moving train.....	Fatal.....	No inquest.
J. B. Pickrein.....	Employee.....	Fell from roof of D.A.R. car to the ground.	Seriously shaken and both wrists sprained.	
Angus Keay.....	"	While putting No. 85 train on ferry steamer 'Scotia' was caught and squeezed.	Collar bone broken..	
Frank Birch (deaf mute)	Neither.....	While walking on track was struck by train.	Fatal.....	No inquest.
Wm. Jones.....	Employee.....	While walking on track was struck by train.	Fatal.....	Fireman of H. & S. W. blamed for not keeping better look out.
J. F. Lamkie.....	"	Slipped while uncoupling engine from train.	Hand crushed.....	
Harry Dowlegan.....	Neither.....	While attempting to steal a ride fell under cars.	Fatal.....	Accidental.
D. S. Munro.....	Employee.....	While coupling cars.....	Hand crushed.....	
Antoine Paradis.....	"	Struck by train while crossing track.	Seriously injured....	
H. Garon.....	Neither.....	Struck by train while walking on track.	Not serious.....	
Aug. Lemieux.....	Neither.....	Found dead on track.....	Fatal.....	Accidental.
L. Morneau.....	"	Found dead on track.....	Fatal.....	Accidental.
J. H. Biswaieger.....	Employee.....	While shunting foot got caught under snow plow.	Foot injured.	
R. Ruel.....	"	Tubes burst in fire box.....	Badly scalded.....	
P. Lemieux.....	"	" "	Slightly scalded. ...	
Mrs. Grant.....	Passenger.....	Jumped from moving train.....	Not serious.....	
R. Atkinson.....	"	Train left the rails.....	Ankle fractured....	
Jas. Johnson.....	Employee.....	While coupling cars.....	One finger crushed...	

INTERCOLONIAL

STATEMENT of Accidents and Casualties which have occurred in Canada on the

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1906.							
Feb. 5..	11.50	Spl.	Work train	J. F. Doyle.....	H. Cameron.....	225	2½ miles west Beaver Brook.
Feb. 11..	23.00	....	Shunter....	L. Walsh.....	J. Day.....	210	Halifax.....
" 13..	10.15	2	Express....	Jas. Millican.....	T. W. Prince.....	148	Moncton.....
" 22..	9.20	....	.....	.....	T. Edwards.....	309	Truro.....
" 27..	1.45	9	Express....	E. Thompson.....	J. Wall.....	237	Brookfield.....
.....	.....	26	" ..	T. Guinan.....	J. Flavin.....	317	" .....
March 8..	12.50	Pl'w	Special....	J. E. McLellan.....	Benj. Titus.....	296	Near Boisdale.....
					Neil McMullen.....	202	" " .....
" 8..	14.50	"	" ..	J. B. LeBel.....	O. Gagnon.....	214	Near Harlaka Jct.....
" 10..	7.25	39	Freight....	C. McDougall.....	S. Thomas.....	310	Newcastle.....
" 13..	19.30	102	Mixed.....	A. A. McNeil.....	J. Gallivan.....	154	Barachois .....
" 14..	14.50	Spl.	Freight....	J. H. Pushie.....	Chas. Wilson.....	161	Near Sydney.....
" 15..	22K	....	Shunter....	L. Walsh.....	J. Day.....	210	Halifax.....
" 17..	24K	....	" ..	.....	J. McLean.....	288	Richmond.....
" 19..	10.30	....	.....	.....	J. Dussault.....	301	Chaudière Jct.....
" 21..	11.00	....	.....	.....	C. Wilson.....	170	Sydney.....
					A. Fogo.....	349	" .....
" 21..	20.30	....	.....	.....	Saml. Stewart.....	61	Truro.....
" 27..	12.50	....	Shunter....	.....	C. Skinner.....	205	Halifax.....
" 28..	1.40	Spl.	Freight....	A. Arcand.....	O. Rossignol.....	260	Isle Verte.....
" 28..	23.15	....	Shunter....	.....	J. Kelly.....	105	Truro.....
" 29..	1K	Spl.	Freight....	C. B. Clarke.....	G. A. Stone.....	277	Hampton.....
" 30..	13.28		34Express..	F. Derouin.....	J. Bruce.....	74	Ste. Rosalie.....
.....	.....	....	.....	.....	J. Lacroix.....	102	" .....

SESSIONAL PAPER No. 20

RAILWAY.

line of the Intercolonial Railway during the year ending June 30, 1906—*Concluded.*

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
D. Thibadeau	"	Collided with Scars' west bound special.	Fatal	Accidental.
W. Stuart	Passenger	" "	Seriously injured	
Chas. LeBrenton	"	" "	" "	
John McDonald	"	" "	Slightly "	
Wilfred Toucher	"	" "	" "	
Wm. McRae	"	" "	" "	
Geo. Campbell	"	" "	" "	
Thomas Norton	"	" "	" "	
Wm. Kitchen	"	" "	" "	
Chas. Kenton	"	" "	" "	
John Fagan	"	" "	" "	
Howard Jeffries	"	" "	" "	
James McDonald	"	" "	" "	
Wm. Gallant	"	" "	" "	
James Gardiner	"	" "	" "	
Ed. Benson	"	" "	" "	
E. Astles	"	" "	" "	
Andrew Walls	"	" "	" "	
Wm. Allison	"	" "	" "	
Wm. Galley	"	" "	" "	
Andrew Cobb	"	" "	" "	
Wm. Coundron	"	" "	" "	
Wm. Black	"	" "	Seriously "	
John McCollum	"	" "	" "	
A. Witzell	"	" "	Slightly "	
Chas. McLellan	"	" "	Seriously "	
Thos. Halloran	"	" "	Slightly "	
James Wright	"	" "	" "	
Wm. Fagan	"	" "	" "	
Harry Levi	Employee	While shunting fell from top of box car.	Severely injured	
B. F. McKinnon	"	Struck by step of engine	Leg badly bruised	
Geo. Cameron	"	Struck by engine while walking on track.	Foot injured and collar bone broken.	
J. Flavin, L. Hill, S. C. Keith	"	Collision between Nos. 26 and 9 trains caused by No. 26 overrunning crossing station.	Fatal	Accidental
Wm. Lattimere	"	" "	Slight injuries	
E. A. Hartlen	P. O. clerk	" "	" "	
Thos. O'Reily	"	" "	" "	
E. F. Hefler	Passenger	" "	" "	
G. Cook	"	" "	" "	
A. J. McDonald	Employee	Struck by train	Leg broken	
"	"	"	" "	
Bouchard	Neither	Lying along side of track and was struck by plow.	Not serious	
Geo. Dixon	Employee	While coupling cars	Fingers jammed	
R. Nicholson	Passenger	Train broke in two and parts collided.	Slight injuries	
M. McNeil	"	" "	" "	
John McDonald	"	" "	" "	
Mike McMullin	Neither	Struck by train while walking on track.	Fatal	Accidental.
H. Simmons	Employee	Fell from top of box car	Seriously injured	
Richd. Stuart	"	While shunting got caught between cars.	Collar bone broken.	
Albert Carrier	"	While coupling cars	Hand jammed	
Wm. Calhoun	"	While engine 170 was running from shop to coal shed collided with shunting engine.	Slightly injured	
D. McKenzie	"	" "	" "	
J. O. Davison	"	While stepping off snow plow foot got caught.	Foot badly injured	
Pat. Scallion (boy)	Neither	Riding on flat car lost his balance falling under wheels.	Fatal	No inquest.
O. Rossignol	Employee	Struck by No. 76 train while working about his engine in siding.	Fatal	Accidental.
R. K. Livingstone	Neither	Struck by cars while crossing track	Fatal	Accidental.
H. B. Wood	Employee	Knee caught between car and piece of deal.	Slightly injured	
Xavier Breault	Neither	Struck on public crossing while driving in front of moving train.	Not serious	

WINDSOR BRANCH RAILWAY.

OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS.
MONCTON, N.B., July 2, 1907.

SIR,—I have the honour to submit the following statements showing the results of the working of the Windsor Branch Railway for the fiscal period of nine months ended March 31, 1907.

No. 1. Revenue account.
2. Maintenance of way and structures.
3. General balance.
4. Statements of earnings.

I also send you the report of the engineer of maintenance on the condition of the permanent way and works.

This line, 32 miles in length, was operated during the year by the Dominion Atlantic Railway Company on the same terms as last year, the company being allowed to retain two-thirds of the gross earnings, the balance, one-third, being paid over to the government, the latter maintaining the line.

The gross earnings show an increase of $5,677.89 compared with the corresponding period of the previous year, as follows :—

Earnings, 1906-07 (9 months)	$ 45,440 52
Earnings, 1905-06 (9 months)	39,762 63
Increase (9 months)	$ 5,677 89

The increase was in freight traffic and in passenger traffic. There was a slight decrease in mails and sundries.

The net earnings for the nine months period were $30,015.20.

The permanent way and works received necessary repairs and are in good order.

I have the honour to be sir,

Your obedient servant,

D. POTTINGER,
General Manager, Govt. Rys.

M. J. BUTLER, Esq., C.E.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

No. 1.—WINDSOR BRANCH RAILWAY.

REVENUE ACCOUNT, 9 MONTHS, ENDING MARCH 31, 1907.

Expenditure.	$ cts.	Earnings.	$ cts.
Maintenance of way and structures	15,425 32	Passenger	12,199 42
Balance	30,015 20	Freight earnings	32,379 98
		Mail earnings	861 12
	45,440 52		45,440 52

E. and O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller

No. 2.—WINDSOR BRANCH RAILWAY.

MAINTENANCE OF WAY AND STRUCTURES, 9 months, ended March 31, 1907.

	$ cts.
Repairs of roadway	9,585 83
Renewals of rails	935 17
Renewals of ties	2,541 22
Repairs and renewals of bridges and culverts	334 18
Repairs and renewals of fences, road crossings, signs and cattle-guards	424 80
Repairs and renewals of buildings and fixtures	1,604 12
	15,425 32

E. and O. E.,
MONCTON, N.B.

S. L. SHANNON,
Comptroller.

No. 3.—WINDSOR BRANCH RAILWAY.

GENERAL BALANCE, 9 months, ended March 31, 1907.

DR.	$ cts.	CR.	$ cts.
To stores department	9,636 70	By Dominion account	9,772 03
Dominion Atlantic Railway	135 33		
	9,772 03		9,772 03

E. and O. E.,
MONCTON, N.B.,

S. L. SHANNON,
Comptroller.

No. 4.—WINDSOR BRANCH RAILWAY.

MONTHLY STATEMENT OF RECEIPTS—ONE-THIRD EARNINGS.

Month.		Passenger Earnings.	Freight Earnings.	Mail Earnings	Totals.
		$ cts.	$ cts.	$ cts.	$ cts.
July	1906	1,721 85	2,157 66	95 68	3,975 19
August	"	1,980 44	2,350 90	95 68	4,427 02
September	"	2,989 69	3,332 17	95 68	6,417 54
October	"	1,846 96	4,468 77	96 91	6,412 64
November	"	983 30	4,948 55	96 91	6,028 76
December	"	773 64	3,076 89	96 90	3,947 43
January	1907	609 10	4,230 46	94 46	4,934 02
February	"	486 73	3,627 98	94 45	4,209 16
March	"	807 71	4,186 60	94 45	5,088 76
		12,199 42	32,379 98	861 12	45,440 52

E. and O. E.,
MONCTON, N.B.,

S. L. SHANNON,
Comptroller.

INTERCOLONIAL RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE,
MONCTON, N.B., May 31, 1907.

SIR,—I have the honour to submit herewith the report of the maintenance of the Windsor branch during the nine months, July 1, 1906, to March 31, 1907.

TRACK.

During the past year 17,594 feet of 4-inch, 4¼-inch and 4½-inch rails were taken out of track, and the same quantity of 4¼-inch and 4½-inch rails re-laid.

TIES.

8,062 ordinary ties and 7 sets of switch ties were renewed during the year.

BALLASTING.

During the year 212 cubic yards of ballast were distributed and put under.

SWITCHES AND SEMAPHORES.

During gthe year necessary repairs were made to swittches and semaphores.
One new switch was installed and four old switches replaced by new.
During the year one new telegraph signal was put in at Windsor.

FENCING.

During the year 40 rods of woven wire fence were built by our own men.
Necessary repairs were made to existing fences.

BUILDINGS AND PLATFORMS.

Repairs.

Windsor,	Platform.
Windsor,	Station.
Mount Uniacke,	Platform.
Mount Uniacke,	Station.
Beaver Bank,	Platform.
Beaver Bank,	Station.
Ellershouse,	Platform.
Ellershouse,	Station.
Newport,	Platform.
South Uniacke,	Platform.
Windsor Junction,	Freight shed.
Windsor Junction,	Platform.

BRIDGES AND CULVERTS.

Repairs.

Windsor,	Culvert.
Mount Uniacke, 1½ miles east of	Bridge.
Ellershouse,	Culvert.
St. Croix, near Ellershouse,	Bridge.
Newport,	Culvert.
Windsor Junction,	Culvert.
Newport, ½ mile east of	Culvert.

GENERAL.

Necessary repairs were made to cattle guards, road crossings and gates throughout the line where required.

Glazing was done and glass put in where required.

Outhouses and approaches to public road crossings were whitewashed where required.

Semaphores and signals were painted when required.

Necessary repairs were made to hand-cars, trollies and wheelbarrows throughout the line.

I have the honour to be, sir,
Your obedient servant,,
T. C. BURPEE,
Engineer of Maintenance of Way and Works.

D. POTTINGER, Esq.,
General Manager, Government Railways,
Moncton, N.B.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE GENERAL MANAGER OF GOVERNMENT RAILWAYS.
MONCTON, N.B., July 2, 1907.

SIR,—I have the honour to submit the following report on the working of the Prince Edward Island Railway for the fiscal period of nine months ended March 31, 1907.

I inclose the report of the superintendent, including statements of the various accounts, also the report of the chief engineer on the works charged to capital account.

The length of railway in operation on June 30, 1906, was 261·3 miles. On July 1, 1906, the line of railway known as the Montague branch, extending from Montague Junction to Montague, 6·2 miles in length, was opened for traffic, making a total mileage in operation on March 31, 1907, of 267·5 miles.

The expenditure on capital account during the period was $91,710.52.

This makes the total cost of the railway on March 31, 1907, $7,307,299.21. Of the expenditure during the period $70,316 was on account of increased accommodation at Charlottetown, where a commodious and modern passenger station with office accommodation for the staff was provided.

The working expenses for the nine months were	$283,148 50
The gross earnings were	215,434 97
Difference....	$ 67,713 53

The gross earnings for the nine months period show an increase of $25,991.66 over the corresponding period of last year, the increase being in both passenger and freight traffic, and also in mails and sundries.

There was an increase of $65,335.76 in the working expenses compared with the corresponding period of last year.

The necessary work was done to maintain the permanent way and works, and the rolling stock, and they are in a state of efficiency.

I have the honour to be, sir,

Your obedient servant,

D. POTTINGER,
General Manager Government Railways.

M. J. BUTLER, ESQ., C.E.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE CHIEF ENGINEER,
MONCTON, N.B., June 15, 1907.

DEAR SIR,—I have the honour to submit the following report on capital account expenditure for the fiscal year ending March 31, 1907.

To increase accommodation at Charlottetown—

A new station was provided. Plans and specifications were prepared, tenders called and contract let for a freight car repair shop and erecting shop. The work of construction is well advanced.

Murray Harbour Branch and Hillsborough Bridge—

Under this vote the contractor for the transportation and erection of the spans for the Hillsborough bridge was paid $2,284.61 for additional work.

Shelters and Platforms—

Shelters and platforms were provided at Village Green, Glencoe and Wilmot on the Murray Harbour Branch.

Improvements at Summerside—

A three-stall engine house was provided.

I have the honour to be, sir,
Your obedient servant,
WM. B. MACKENZIE,
Chief Engineer.

D. POTTINGER, ESQ., I.S.O.,
General Manager, Government Railways,
Moncton, N.B.

PRINCE EDWARD ISLAND RAILWAY.

SUPERINTENDENT'S OFFICE,
CHARLOTTETOWN, P.E.I., May 15, 1907.

SIR,—I have the honour to submit the following report of the working of the Prince Edward Island Railway, for the fiscal period of nine months ended March 31, 1907 :—

I also inclose the report of the Mechanical Superintendent, and the following statements prepared by the accountant and auditor, and the mechanical accountant and storekeeper :—

No. 1. Capital account.
2. Revenue account.
3. Locomotive power.
4. Car expenses.
5. Maintenance of ways and works.
6. Station expenses.
7. General charges.
8. General stores account.
9. General balance.
10. Comparative statement of averages.
A. Monthly statement of the cost of locomotive power.
B. Statement of performance and consumption of locomotives.
C. Monthly statement of car mileage.
D. Statement of the number of locomotives, cars, snow ploughs and flangers.
E. Comparative statement of the expenses of the mechanical department.

The mileage of the railway in operation on June 30, 1906, was 261·3 miles. The Montague branch was opened for traffic on July 1, 1906, the mileage of which is 6·2, making the total mileage of railway in operation on March 31, 1907, 267·5 miles.

CAPITAL ACCOUNT.

The total expenditure to June 30, 1906, was	$7,215,588 69
The additions during the year were as follows :—	
Rolling stock	11,342 74
New machinery	4,725 15
Increased accommodation at Charlottetown	70,316 00
Murray Harbour branch and Hillsborough bridge	2,397 59
Shelters and platforms	931 03
Improvements at Summerside	1,998 01
	$7,307,299 21

Rolling stock—

Fifteen box cars were built by the mechanical department.

New machinery—

One cut-off saw, one mortise and boring machine, one band saw, and one engine lathe were purchased.

Increased accommodation at Charlottetown.—A new station was built, and a new car shop was commenced under contract awarded to Mr. E. A. Wallberg.

Murray Harbour branch and Hillsborough bridge.—This amount was to settle the claim of the contractors for the transportation and erection of the spans for the bridge. The claim was $18,366.11 and the amount allowed and paid was $2,284.61.

Shelters and platforms.—Shelters and platforms were provided at Village Green, Glencoe, and Wilmot on the Murray Harbour branch.

Improvements at Summerside.—This amount was used for the completion of the engine-house, which was finished within the year.

REVENUE ACCOUNT.

The earnings show a very gratifying increase, notwithstanding the crops were below the average and the winter a very severe one.

The gross earnings and workings for the year compare as follows :—

Gross earnings	$ 215,434 97
Working expenses	283,148 50
Difference	$ 67,713 53

The gross earnings compare with the previous year as follows :—

In 1905-06	$ 189,443 31
1906-07	215,434 97
Increase	$ 25,991 66

The earnings from passenger traffic compare as follows :—

In 1905-06	$ 88,676 14
1906-07	97,750 52
Increase	$ 9,074 38

The earnings from freight traffic compare as follows :—

In 1905-06	$ 83,499 56
1906-07	98,657 07
Increase	$ 15,157 51

The earnings from mails and sundries compare as follows:—

In 1905-06	$ 17,267 61
1906-07	19,027 38
Increase	$ 1,759 77

The number of passengers carried compare as follows:—

	Number.
In 1905-06	187,402
1906-07	232,371
Increase	44,969

The weight of freight carried compares as follows :—

	Tons.
In 1905-06	63,647
1906-07	67,144
Increase	3,497

WORKING EXPENSES.

The working expenses compare with the previous year as follows:—

In 1905-06	$217,812 74
1906-07	283,148 50
Increase	$65,335 76

The averages compare with the previous year as follows:—

Per mile run by locomotives.

In 1905-06	66·77
1906-07	82·30

Per mile run by trains.

In 1905-06	92·24
1906-07	112·23

Expenditure per mile of railway.

In 1905-06	$ 915 18
1906-07	1,060 48

TRACK.

Twelve thousand eight hundred and seventeen railway ties, 38 sets switch ties, and 40 switch head-blocks with frames were renewed.

Eight hundred cull ties were used in yards and sidings.

Seven hundred and forty-four feet of track on wharf at Alberton were laid with 56-lb. rails to replace old iron rails, and three new steel frogs and three sets switch gear were put in to replace worn out switch gear. Twenty-seven hundred feet of track were relaid in Summerside yard with 50-lb. steel rails, and nine new sets switch gear put in, in connection with yard improvements. Seven hundred and five feet of main line track were lined from one foot to eight feet. Eighteen hundred feet of new track were laid with 56-lb. steel rails from Wye on Murray Harbour branch to station, to allow trains on branch to come under the semaphore at Charlottetown, and one steel frog and a new set of switch gear were put in. Six hundred feet of 56-lb. steel rails were laid in Souris yard, and a new frog and a set of switch gear put in. On Montague branch four miles of track were lined from three to twenty inches, and three miles lifted and ballasted; all ties were spaced, and 500 extra ties put in.

Nine hand cars received general repairs, and three new lorries were built.

SIDINGS.

At Bloomfield 384 feet of 56-lb. steel rails were laid in siding to replace old iron rails.

At Summerside a new siding, 450 feet, was put in.

At Hunter river 168 feet 56-lb. steel rails were laid in siding to replace old iron rails.

At Kensington new sidings, 435 feet, were laid with 56-lb. steel rails.

At Georgetown the engine house siding was extended 80 feet.

At Charlottetown 100 feet of spur siding were put in for machine shop to run engine tenders on.

At Murray harbour, 3,100 feet of new sidings were laid in yard with 56-lb. steel rails, and eight new frogs and eight sets gear put in.

FENCING.

There were 43,847 feet Page wire fence erected on new cedar posts; 12,453 feet snow fence built; 415 panels portable snow fence, 8 and 10 feet long, built and placed where most needed. During the fall and winter a large quantity of temporary snow fence was erected of brush and other material.

All fences requiring repairs were attended to.

One hundred and twenty-five farm crossing gates were renewed.

BALLASTING.

Four hundred and sixty cars of ballast were put on Montague branch, 100 cars in Murray harbour yard, and 231 cars in Summerside yard.

On main line 658 cars of ballast were distributed in places where most needed.

Three hundred and fifty-eight cars of clay were used in yards, and widening embankments on Montague Branch and other narrow places.

BRIDGES.

At Portage a new bridge was built on a foundation of creosoted piles.

At Emerald a new cover and bed timber was put on bridge on way. New iron bridge on main line near Emerald, 24 feet long, was covered with hard pine ties.

At Clyde a new iron bridge, 24 feet long, was put in.

At Souris overhead bridge on wharf was planked.

Bridges at Mt. Stewart, Lot 40, Marie, Midgell, Harmony, St. Peters, Brudenell and Clyde were pointed with cement.

Bridges at Freetown, Loyalist and Marie received coverings of hard pine ties and necessary repairs.

All other bridges on the line requiring repairs were attended to.

CULVERTS.

At O'Leary, Conway and Bradalbane iron pipe culverts, 16 inches in diameter, were put in to replace wooden culverts.

At Hughes siding, twenty-four feet of 24-inch pipe were put in to replace wooden culvert which was worn out.

At Milton two new iron pipe culverts were put in.

At Georgetown two new iron pipe culverts were put in.

Thirty-three wooden culverts were rebuilt with cedar and other material.

Thirteen stone culverts were repaired by using cement and stone.

Four new cattle-guards were put down at new public road crossings.

Thirty-two cattle-guards were rebuilt with hard pine stringers, hemlock ties, hemlock timber and mud sills.

BUILDING AND PLATFORMS.

At Alberton repairs were made to wharf.

At Summerside, in repairing the wharf the following material was used :—18 hardwood piles, 5 creosoted piles, 47 tons hemlock timber, 1,440 feet hemlock deals, and 2 kegs nails. Coal shed was moved on wharf, 13 hardwood piles driven, and 36 holes cut through ballast floor for piles. Breastwork was repaired, and 50 feet of new breastwork built on.

At Charlottetown, in repairing breastwork 16½ tons hemlock timber, and 200 butt bolts were used.

BUILDING AND PLATFORMS.

Tignish.—A new roof and new sills were provided the engine-house. Concrete cellar was placed under agent's dwelling.

Bloomfield.—Repairs were made to station.

Howlan.—Repairs were made to station.

O'Leary.—Repairs were made to roof of station.

Alberton.—Freight-house on wharf was repaired.

Miscouche.—Station platform was rebuilt.

Summerside.—A new freight-house, 50 x 24 feet was built to replace the one destroyed by fire. A new station platform, 75 feet long by 8 feet wide, was made. Ten new storm windows were put on agent's dwelling. A new set of scales was placed in freight-house on wharf. A reinforced concrete reservoir for water tank, 12 x 20 x 12 feet deep, was made, and 150 feet pipe laid connecting reservoir with tank. A new engine-house was built.

Freetown.—A new snow fence was erected near agent's dwelling.

Cape Traverse.—A new porch was built on agent's dwelling, and repairs made to turntable.

Bradalbane.—Station platform was repaired.

Elliott's.—A new station was built, 26 feet long by 10 feet 6 inches wide.

Hunter River.—A new porch was built on agent's dwelling, and repairs made to station.

Loyalist.—Station platform was rebuilt.

Royalty Junction.—Station platform was repaired.

Charlottetown.—Roof of station, baggage room, car shop and stores buildings were repaired.

York.—Roof of station was shingled.

Mt. Stewart.—Repairs were made to station and platform.

Five Houses.—Repairs were made to station platform.

Souris.—Engine-house, freight-house on wharf and station received necessary repairs. Baggage room received a new roof.

Pisquid.—Station was rebuilt.

Perth.—Station and platform received general repairs.

Georgetown.—Engine-house was repaired.

Montague.—A new door was cut in freight-house.

Semaphores at Mt. Stewart and Georgetown were rebuilt.

STORES.

The value of stores purchased was	$ 93,339 28
The value of stores used was	120,877 92
The value of old material sold was	16,567 41

The value of stores on hand at the end of the year was :—

Ordinary stores	$ 53,494 35
Fuel	5,597 43
Steel rails and fastenings	221 53
Old material for sale	7,488 00
	$ 66,801 31

GENERAL.

On October 10, 1906, fire destroyed a freight shed at Summerside, together with a quantity of freight.

A greater quantity of ballast than usual was distributed, and the winter was very severe and lengthened. These, among other reasons already stated elsewhere, contributed to the large expenditure in the maintenance department.

The mechanical department are still working under difficulties for want of new shops, which are now under construction. The renewals during the year were considerable in this department.

The rolling stock, road-bed and buildings have all received special attention, and are in a state of efficiency.

I inclose a return of minor casualties which occurred during the year.

I have the honour to be, sir,

Your obedient servant,

C. A. SHARP,

Superintendent.

D. POTTINGER, Esq., I.S.O.,
General Manager, Government Railways,
Moncton, N.B.

PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL SUPERINTENDENT'S OFFICE,

CHARLOTTETOWN, April 15, 1907.

SIR,—I beg to submit herewith for your information the following statement of the operation of the mechanical department of the Prince Edward Island Railway for the year ended March 31, 1907.

The following is a summary of the principal work performed:—

LOCOMOTIVES.

Thirteen locomotives received heavy repairs, and eight received new driving boxes. Thirteen locomotives received new engine truck boxes, new driving brasses, new side and main rod brasses, motion and running gear thoroughly repaired and stay bolts in boilers thoroughly examined; and eight locomotives received specific repairs. We had one head-on collision in the yard at Charlottetown, which injured two locomotives considerably, breaking the truck and forward frames of both, the smoke-box doors and castings on one, and front beams and pilots on both. We had two cylinder heads broken, which we repaired. Ten pop valves were largely rebuilt; four new whistles and 140 sets of steam packing were made. Fifty-six driving wheels and 24 sets of truck wheels were turned, and eight new pistons and piston rods were turned and put in locomotives. Two new cross-heads were made, and 24 lined with tin and planed; 80 new side rod cups and 114 truck springs were made, and eight new pilots were made and ironed. Six new truck axles, 130 car axles and 130

pairs car wheels were turned; 140 car oil boxes were filled up, 800 tubes were pieced and put into locomotives, and 274 wheels were bored out and pressed on axles; and 174 driving springs were largely rebuilt. One thousand one hundred and twenty-two pounds of east steel and 95,735 pounds of iron were forged, and 5,400 pounds of nuts were tapped. Westinghouse air brake was applied to one locomotive, and steam heat to four; 12 locomotive smokestacks were made, and we have made a great deal of running repairs, too numerous to mention.

CAR DEPARTMENT.

Fifteen box cars were built and equipped with the Westinghouse air brake, and charged to capital. One box car, one flanger, 16 flat cars, and one second-class and baggage combined were rebuilt; and one first-class car is at present under construction. Forty box cars, four flat cars, eight passenger cars, three flangers and two refrigerator cars received heavy repairs. Ten passenger cars, 20 box cars, 28 flat cars, three flangers and 5 snow ploughs received light repairs; 7 flangers and 10 snow ploughs were equipped with air signal appliance, and eight new locomotive pilots were made.

BRASS FOUNDRY.

Output, 8,590 pounds brass castings and 125 battery zines.

PAINT SHOP.

Twenty-five passenger cars were cleaned and varnished, and two passenger cars were painted and varnished; eight locomotives were painted, and two were cleaned and varnished; and nine snow ploughs, 33 box cars, 29 flat cars, 15 hand cars and 40 switch frames were painted. Elliotts and Bedford stations were painted inside and out; Ashton, Harmony and West Devon coal sheds, Summerside section house, and Murray harbour and Montague turn-tables were painted; and 300 panes of glass were put in buildings.

ROAD AND TRAFFIC DEPARTMENT.

Part of the car shop roof was covered with felt, and part with shingles ; the store, coal shed and paint shop roofs were repaired, and two double water closets were built. Eight cattle stages, 27 loading platforms, three way stations on the Murray Harbour branch, and 40 switch frames were made, and 20 were mounted. Ten billing boards, four freight trucks, one large ticket case, six boxes for traffic, six coal wagons, six targets, 12 sets of switch gear, five new frogs, two derailing devices for the Hillsborough bridge, 40 smoke jacks for engine houses, 12 new track lifters, and a great many butt bolts for Summerside wharf were made; and six freight trucks, three baggage trucks and four frogs were repaired; and one old first-class car was converted into a pay car.

I wish to say that we are labouring under a great disadvantage for the want of shop room and machinery; but I am pleased to report that our rolling stock is in a high state of efficiency and equipped with all the modern appliances of Westinghouse air brakes, steam heat, and M.C.B. couplers.

I have the honour to be, sir,

Your obedient servant,

W. L. POOLE,

Mechanical Superintendent.

G. A. SHARP, Esq.,
Superintendent P. E. I. Railway.

No. 1.—PRINCE EDWARD ISLAND RAILWAY.

DR. CAPITAL ACCOUNT. CR.

1906.		$ cts.	1906.		$ cts.
June 30..	To cost of road and equipment to date.....	7,215,588 69	June 30..	By Dominion of Canada....	7,215,588 69
1907.			1907.		
March 31.	To expenditure, period ended March 31, as follows —		Mar. 31...	By Dominion of Canada	91,710 52
	Rolling stock . .. .$ 11,342 74				
	New machinery 4,725 15				
	Increased accommodation, Charlottetown.. ..... 70,316 00				
	M. H. B. and Hillsboro bridge 2,397 59				
	Shelters and platforms..... ... 931 03				
	Improvements at Summerside..... 1,998 01				
		91,710 52			
		7,307,299 21			7,307,299 21

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., March 31, 1907.

No. 2.—PRINCE EDWARD ISLAND RAILWAY.

DR. REVENUE ACCOUNT for period ending March 31, 1907. CR.

Previous corresponding period.	Expenditure.	Period ended March 31, 1907.	Previous corresponding period.	Receipts.	Period ended March 31, 1907.
$ cts.		$ cts.	$ cts.		$ cts.
74,401 21	Locomotive power, per Abstract No. 1.....	91,196 08	88,676 14	Passenger traffic.....	97,750 52
38,481 40	Car expenses, per Abstract No. 2.	52,531 35	83,499 56	Freight traffic	98,657 07
54,169 92	Maintenance of way and works, Abstract No. 3..	80,633 47	17,267 61	Mails and sundries ..	19,027 38
38,809 72	Station expenses, per Abstract No. 4	44,913 28	189,443 31	.. .Total receipts ...	215,434 97
11,950 49	General charges, per Abstract No. 5.	13,874 32	28,369 43	... .. Balance .	67,713 53
217,812 74	....Totals.....	283,148 50	217,812 74	.....Totals.	283,148 50

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., March 31, 1907.

No. 3.—PRINCE EDWARD ISLAND RAILWAY.

LOCOMOTIVE POWER (Abstract No. 1).

Previous Corresponding Period.	Details.	Period ended March 31, 1907.
$ cts.		$ cts.
2,112 26	Mechanical superintendent's salary, clerks, office and travelling expenses. .	2,334 06
22,465 65	Wages of drivers, firemen and cleaners.....	27,101 46
28,127 91	Fuel.....	32,851 75
1,422 64	Oil, tallow, waste and small stores.....	2,016 82
16,446 81	Repairs to engines, tenders and engine tools	20,253 20
1,127 53	Water, including pump and tank repairs.....	3,493 47
2,698 41	Miscellaneous.....	3,145 32
74,401 21	... .Totals.....	91,196 08

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., March 31, 1907.

SESSIONAL PAPER No. 20

No. 4.—PRINCE EDWARD ISLAND RAILWAY.

Car Expenses (Abstract No. 2).

Previous Corresponding Period.	Details.	Period ended March 31, 1907.
$ cts.		$ cts.
3,494 10	Repairs to passenger cars	6,705 82
1,162 31	Repairs to postal, express and baggage cars	4,887 85
4,897 90	Repairs to freight cars and vans	9,105 87
431 61	Repairs to snow ploughs and flangers	1,547 89
23,845 79	Wages of conductors, train baggage masters and brakemen	24,913 97
520 22	Oil and waste for packing	657 35
2,702 67	Small stores and fuel	3,359 01
1,426 80	Miscellaneous	1,362 59
38,481 40	Totals	52,531 35

W. T. HUGGAN,
Accountant and Auditor.

Charlottetown, P.E.I., March 31, 1907.

No. 5.—PRINCE EDWARD ISLAND RAILWAY.

Maintenance oe Way and Works (Abstract No. 3).

Previous Corresponding Period.	Details.	Period ended March 31, 1907.
$ cts.		$ cts.
541 07	Engineer's salary, clerks, office and travelling expenses	642 56
38,391 38	Wages in repairing roadway, fences and semaphores	50,839 18
1,895 81	Rails, chairs and spikes	1,958 34
4,424 03	Ties	8,939 21
2,195 49	Timber and lumber for repairs to bridges, cattle-guards, &c	4,162 33
109 80	Repairs to wharfs	1,266 94
2,837 84	Repairs to buildings and platforms	5,788 54
936 31	Repairs to tools	1,375 09
2,838 19	Clearing ice and snow	5,661 28
54,169 92	Totals	80,633 47

W. T. HUGGAN,
Accountant and Auditor.

Charlottetown, P.E.I., March 31, 1907.

No. 6.—PRINCE EDWARD ISLAND RAILWAY.

STATION EXPRESS (Abstract No. 4).

Previous Corresponding Period.	Details.	Period ended March 31, 1907.
$ cts.		$ cts.
31,195 20	Salaries and wages of station masters, agents, clerks, telegraph operators, station baggage masters, yardmasters, switchmen, watchmen and labourers	36,268 00
7,614 52	Fuel, oil, light, stationery and other incidental expenses	8,645 28
38,809 72	Totals	44,913 28

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., March 31, 1907.

No. 7.—PRINCE EDWARD ISLAND RAILWAY.

GENERAL CHARGES (Abstract No. 5).

Previous Corresponding Period.	Details.	Period ended March 31, 1907.
$ cts.		$ cts.
5,962 77	Superintendent's and train despatchers' salaries, clerks, office and travelling expenses	6,814 41
4,577 51	Accountant and auditors's, paymaster's and cashier's salaries, clerks, office and travelling expenses	5,159 06
361 78	Advertising	365 53
527 63	Damages to men, animals and goods	857 26
113 40	Telegraph expenses (not including pay to operators)	371 37
407 40	Miscellaneous	306 69
11,950 49	Totals	13,874 32

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., March 31, 1907.

No. 8.—PRINCE EDWARD ISLAND RAILWAY.

STATEMENT OF GENERAL STORES ACCOUNT—Period ending March 31, 1907.

1906.	DR.	$ cts.	$ cts.	$ cts.
June 30.	To balance brought forward			73,044 87
1907.				
March 31.	Purchases during the year, including rails		93,339 28	
	Charges from other departments		19,858 36	
	Pay rolls		1,436 72	114,634 36
				187,679 23
	CR.			
March 31.	By issues during the year			120,877 92
	Balance—Ordinary stores	53,494 35		
	Balance—Fuel	5,597 43		66,801 31
	Balance—Rails and fastenings on hand	7,709 53		
	Balance—Old material serviceable			

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., March 31, 1907.

No. 9.—PRINCE EDWARD ISLAND RAILWAY.

GENERAL BALANCE.

	$ cts.		$ cts.
General stores	66,801 31	Dominion Account	87,721 70
Cash	4,192 84	Rhodes, Curry & Company	1,433 20
Stations	3,648 48	Unclaimed wages	39 13
Post Office Department	11,073 58		
Militia Department	56 28		
Anglo-American Telegraph Company	46 43		
Judge Weatherbie	30 00		
Sidney Grey	45 83		
Railway extension at Charlottetown	812 83		
Accident insurance	2,259 92		
Canadian Express Company	96 51		
Intercolonial Railway	39 20		
Unclaimed freight	90 82		
	89,194 03		89,194 03

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., March 31, 1907.

No. 10.—PRINCE EDWARD ISLAND RAILWAY.

COMPARATIVE STATEMENT of Averages for period ending March 31, 1907 and 1906.

Details.	1907.	1906.
Mileage of railway open	267	261
Engine mileage	344,050	324,911
Train mileage	252,292	235,210
Car mileage	1,463,186	1,427,214
Receipts per engine mile ..... Cents	62.22	58.31
" mile of railway ..... Dollars	806 87	795.98
Percentage of passenger earnings to gross receipts	45.37	46.81
" freight " "	45.80	44.08
" other " "	8.83	9.11
Expenses per engine mile :—		
Drivers, firemen and cleaners' wages	7.85	6.91
Fuel	9.55	8.66
Oil, tallow, waste and small stores	.59	.44
Repairs to engines	5.89	5.06
Water and tank repairs	1 02	.35
Miscellaneous	.93	.83
	25.83	22.25
Mechanical superintendent's salary, office and travelling expenses	.68	.65
Total ..... Cents	26.51	22.90
Locomotive power, per engine mile	26.51	22 90
Car expenses	15.27	11.58
Maintenance of way and works, per engine mile	23.44	16.67
Station expenses	13.05	11.94
General charges	4.03	3.68
Total ..... Cents	82.30	66.77
Locomotive power, per train mile	36.15	31 63
Car expenses	20.82	16.00
Maintenance of way and works	31.96	23.03
Station expenses	17.80	16.50
General charges	5.50	5.08
Total per train mile ..... Cents	112 23	92.24
Working expenses, per mile of railway ..... Dollars	1,060.48	915.18

Average mileage open for nine months ended March 31, 1906, was 238 miles, which was used for averages.

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., March 31, 1907.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

DETAILS of Accidents for the period ending March 31, 1907...

Date.	Name, Address and Occupation of Persons.	Place of Accident.	Cause.	Nature and Extent of Injury.
1906.				
July 17.	Josiah Carmody, car repairer, Ch'town.	Charlottetown..	Foot caught in switch.	Leg injured.
" 25	James Merry, carpenter, Charlottotown.	" ..	Fell off car.....	Head injured.
Aug. 10.	Frank McKee, brakeman, Ch'town.....	Alberton.....	Fell against switch frame	Ribs fractured.
" 16.	Jas. Handrahan, car repairer, Ch'town..	Charlottetown...	Plank fell against leg..	Leg injured.
" 20.	Chas. Coyle, cleaner, Charlottetown....	" ..	Ran wire in hand.....	Hand wound.
Sept. 6.	Wm. Stewart, section laborer, Royalty Junction..	Royalty Junction	Struck by track jack..	Jaw injured.
" 8.	Pat. McCloskey, boiler maker, Ch'town.	Charlottetown..	Finger crushed by brake spindle.....	Finger crushed.
" 15.	J. J. McKenzie, sect. foreman, Selkirk.	Selkirk.....	Fell while carrying rail	Arm broken.
Oct. 11.	Neil Stewart, sect. laborer, Kensington.	Kensington	Fell across rail	Back injured.
" 13.	Jas. McCallum, fireman, Summerside...	Summerside	Fell off engine	Rib fractured.
" 30.	Maurice Arsenault, labourer, Summerside	"	Loading ties	Hand cut.
" 31.	Martin Walsh, carpenter, Ch'town. ...	Charlottetown...	Carrying plank.....	Rib fractured.
Nov. 26.	John Hunter, loc. engineer, Ch'town...	" ..	Working on engine....	Hand lacer'ed.
Dec. 3.	M. McCarey, stat. " "	" .	Climbing ladder.....	Leg lacerated.
" 4.	Richard Dougan, Loc. Eng., Georgetown	" ..	Inspecting engine.....	Arm scalded.
" 7.	M. M. Galbraith, boiler maker's helper, Charlottetown.	" ..	Heavy tool fell on foot.	Foot bruised.
1907.				
Jan. 3.	Robert Hannah, machineman, Ch'town.	" .	Car sill fell on foot...	"
" 19.	Wm. McDougall, blacksmith, Coleman.	Coleman.....	Crossing track in front of moving train.....	Fatally inj'ed.
Feb. 4.	Thos. Clarke, fireman, Cape Traverse...	Cape Traverse..	Struck head while firing	Head cut.
" 6.	Benj. Horton, sect. labourer, Mt. Albion	Mt. Albion.....	Hand car ran over foot	Toe fractured.
Mar. 14.	Pat. Walsh, labourer, Charlottetown ...	Charlottetown...	Fell off car.....	Elbow disl'ed.
" 18.	M. T. Riggs, pipe fitter, Charlottetown.	" ..	Fell in yard.....	Knee and shoulder inj.
" 20.	John Walker, sect. labourer, Georgetown	Georgetown.....	Struck by flanger lever	Jaw bone frac.

CHARLOTTETOWN, P.E.I., May 20, 1907.

PRINCE EDWARD ISLAND RAILWAY.

Accidents during period ended March 31, 1907.

Cause of Accident.	Passengers.		Employees.		Others.		Total.	
	Killed	Injured.	Killed	Injured.	Killed	Injured.	Killed	Injured.
1. Fell from cars or engine				3				3
2. Jumping on or off trains or engines while in motion								
3. At work on or near the track making up trains								
4. Putting arms or heads out of windows								
5. Coupling cars								
6. Collision, or by trains thrown from track								
7. Struck by engines or cars on highway crossings					1		1	
8. Walking, standing, lying sitting or being on track								
9. Explosions								
10. Striking bridges								
11. Other causes				19				19
Total				22	1			22

Charlottetown, P.E.I., May 20, 1907.

INTERCOLONIAL RAILWAY OF CANADA.

Office of the General Manager,
Moncton, N.B., July 18, 1907.

M. J. Butler, Esq., C.E.,
Deputy Minister and Chief Engineer,
Department Railways and Canals,
Ottawa, Ont.

Dear Mr. Butler,—Herewith I send you a descriptive statement of the freight earnings of the Prince Edward Island Railway for the fiscal period of nine months ended March 31, 1907.

Yours very truly,

D. POTTINGER.

Charlottetown, P.E.I., June 20, 1907.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

Descriptive Statement Freight Earnings for period ended March 31, 1907.

Description of freight.	Quantites.		Tons.		Amount.	
	1905-6.	1906-7.	1905-6.	1906-7.	1905-6.	1906-7.
					$ cts.	$ cts.
Grain.... Bush.	712,786	343,971	12,202	6,141	14,377 05	7,214 03
Potatoes and roots..... "	112,087	54,019	3,363	2,036	3,232 20	2,327 33
Flour and meal. Brls.	13,738	22,829	1,418	2,288	1,883 46	3,307 72
Cod and other fish.....	.....	.....	962	1,600	1,897 24	3,417 24
Canned fish and meats .... Cases.	26,381	22,949	859	722	1,243 48	1,212 93
Oysters ..... Brls.	10,861	16,881	1,087	1,788	1,188 08	2,511 53
Timber ... C. ft.	88,240	69,770	1,819	1,595	1,010 58	857 43
Lumber ..... S. ft.	2,299,175	2,616,411	3,474	4,374	2,522 98	3,572 37
Cordwood.. Cords.	2,701	1,876	4,467	3,082	2,042 61	1,381 71
Mussel mud..... Cars.	430	307	4,300	3,080	1,420 50	1,044 35
Coal ..... "	302	378	3,680	4,369	2,166 07	2,877 00
Salt.....	.....	.....	853	387	688 77	488 25
Live stock..... No.	17,160	17,937	2,005	2,352	4,068 75	5,172 51
Fresh meats..	.....	.....	1,429	1,630	2,999 97	3,914 54
Salt meats..... Pkgs.	1,953	2,525	282	307	451 63	586 52
Butter and cheese.....	.....	.....	741	1,000	1,363 59	2,241 89
Eggs ..... Pkgs..	30,941	34,354	1,064	1,148	2,241 44	2,767 78
Farina starch... Cars.	63	57	726	589	892 97	769 36
Merchandise.....	.....	.....	18,916	28,746	37,909 98	51.527 34
Wharfage and storage.....	.....	.....	.....	.....	1,996 31	1,465 24
			63,646	67,144	85,597 66	98,657 07

Passenger receipts.....	$97,750·52
No. passengers carried.....	232,371
Receipts per passenger in cents.....	42·07

Charlottetown, P.E.I., June 20, 1907.

QUEBEC CANALS.

Office of the Superintending Engineer,
Montreal, June 11, 1907.

Sir,—I have the honour to submit herewith my annual report on the works under my charge, for the fiscal year ended March 31, 1907.

This division comprises the Lachine, the Soulanges and the Beauharnois canals on the St. Lawrence route ; the Ste. Anne, the Carillon and Grenville canals, on the Ottawa river, and the St. Ours and the Chambly canals, on the Richelieu river.

Of these, the Lachine canal is by far the most important on account of its immediate connection with the harbour of Montreal.

I am pleased to say that no serious accident occurred during the last fiscal year, and that the navigation was conducted without interruption except on the Lachine canal when traffic had to be suspended for 56 hours, from 6 a.m. on the 28th to 1.30 p.m. on the 31 August, owing to the throwing down of the four gates of Coté St. Paul lock by the Str. *Dundurn* on her way down to Montreal.

She passed into the lock at a good rate of speed and could not be checked in time to avoid collision with the lower gates, something in her machinery having got out of

order. She escaped without serious injury but considerable damage was caused to property along both sides of the canal.

At the time of writing the owners of the boat have settled most of the claims arising out of this accident.

LACHINE CANAL.

Length, 8½ miles; 5 locks, 270 x 45 feet; 14 feet of water on sills; total rise, 45 feet.

Old locks, 200 x 45 feet; still available with 9 feet of water on sills.

REPAIRS AND RENEWALS.

The main items of work performed here during the year under the above head were as follows:—

LOCK AND LOCK GATES.

The masonry of all the locks was kept in thorough repair, the joints grouted and pointed, the anchorages of the gates were also attended to as well as the lock gate machinery.

Seven pairs of lock gates were rebuilt, a large quantity of new material being used.

Out of the seven pairs, two were spare gates, one for lock No. 1, the other for lock No. 2.

SWING BRIDGES.

The seven swing bridges on this canal were scraped and painted and the swinging machinery was also attended to.

STATIONARY BRIDGES.

There are eight small stationary bridges connected with this canal. Every one of them received more or less attention during the year and bridge No. 8 which spans the old canal above lock No. 5, at Lachine, was replaced by an iron structure manufactured in our shops out of scrap taken out of the old iron and timber bridges now discarded.

WEIRS.

Six vertical swinging oak valves with heavy oak frames were placed in the regulating culverts between north and south basins No. 1.

The regulating weir at lock No. 4 was given a general overhauling.

The strong iron racks at the head of the supply weirs at Lachine which had been seriously damaged by frazil ice in the winter of 1905-6 were rebuilt and put in position again and some of the valves and stop-logs renewed.

WHARFS.

The long wharf on the north side of basin No. 2, above Black's bridge, was thoroughly repaired in the spring and the planking renewed.

Other wharfs were kept in good condition.

BOOMS.

Two new booms 200 feet long by 9 feet in width were built and placed in position on the north side of the canal between lock No. 4 and Coté St. Paul bridge. They have made it possible for heavy vessels to lie alongside of the north wall while waiting their turn to pass into the lock.

CAST-IRON MOORING POSTS.

During the year 24 permanent cast-iron mooring posts set in concrete were placed as follows :—3 on old lock No. 3, 8 above Seigneurs Street bridge, north side of canal, and twelve between lock 4 and Coté St. Paul bridge, also on the north side.

GOVERNMENT BUILDINGS.

The Mill street shops, foremen's lodgings on Riverside street and the buildings leased to the Canada Horse Nail Company were overhauled.

The floors of the flour sheds Nos. 1, 2 and 3 were repaired and kept in as good condition as possible.

River St. Pierre Culvert and Ditches.

The whole of this stream and the drain continuing it up to Rockfield were carefully cleaned last summer and so were the syphon culverts at St. Henri and above Côte St. Paul bridge and the several ditches along the towpath and berm bank.

Shops.

A considerable amount of work was done at our carpenter, blacksmith and machine shops, which are now fairly well equipped, although the shop buildings no longer answer the requirements, and will have to be renewed at short notice.

CAPITAL.

Rebuilding Slope Walls.

On the authority of an Order in Council, dated May 20, 1906, Messrs. M. J. Haney and Roger Miller were recognized by the Department of Railways and Canals as members of the firm of Quinlan & Robertson, contractors for the work above mentioned.

The new firm have spent the whole year in preparing their plant and will commence building operations early in May.

Dredging.

The only dredging done in the Lachine canal during the year was the removal of about 8,000 cubic yards of clay from basins Nos. 1, 2, 3 and 4. During the rest of the season the dredging fleet was employed elsewhere as follows:—

On August 6 the fleet left for Grenville, where it was employed cleaning and widening the steamboat basin north of the wharf at the canal entrance.

This work, which comprised the dredging of some 20,000 cubic yards of clay, was completed on October 16, when the fleet was transferred to Greenlee's Point and Carillon, where some cleaning had to be done in the vicinity of locks Nos. 1 and 3.

On the 22nd of the same month the dredge went down to Hudson on the Lake of Two Mountains and removed the wreck of the steamer *Maud*, for the Ottawa River Navigation Company, the cost of this work being borne by the company.

Finally the fleet was taken down to Montreal on the 29th and laid up for the winter.

INCOME.

Concrete Wall along North Side of Basin No. 4.

The contract for this work was awarded to Messrs. Quinlan & Robertson on March 4, 1907, on plans and specifications prepared during the year.

The Contractors commenced preparations early in March last, and at the close of the fiscal year they were ready to go on with the building operations.

Grading and Finishing Surface on North Side Lock No. 2.

This work consisted of constructing a concrete retaining wall at the west end of basin No. 1, on the north side of lock No. 2, moving and enlarging the office of the engineer in charge, and grading the ground along the lock and adjoining roadway.

The work was performed under contract by Messrs. Quinlan & Robertson.

Widening of Wharf, North Side of North Basin No. 1.

This work comprised the building of a concrete wall 28 feet south of the old north wall of the basin and of the construction of a double ramp, giving access to the wharf from Commissioners street.

It was performed under contract dated November 4, 1904, by Messrs. Quinlan & Robertson, and satisfactorily completed before the end of the fiscal year 1906-07.

Repairs to Leak in Lock No. 1.

The work necessitated here by the leak reported upon during last year comprised the removal of a portion of the old timber bottom of the lock and the replacing of it with concrete, the filling of a deep hole under the south chamber wall also with concrete and the driving of a row of steel sheet piles to form a cut-off at the junction of the old and new work; also the forming, by means of steel sheet piles, of a cut-off above the lock and extending it around the spur wall and up to the north wall of south basin No. 1, as well as through the neck of land between north and south basins No. 1.

This work is still under progress, and will probably be completed about the end of May, 1907.

Electric Installation.

The machinery prepared during the previous year for the electric operation of lock gates by Messrs. Lymburner & Matthews has been entirely almost placed on the gates of the various locks.

At the end of March last the motors, transformers, switches, &c., had still to be installed.

It is expected that the work will be completed within a short time from the date of writing.

SOULANGES CANAL.

Length, 14 miles; 5 locks, 270 x 45 feet; 15 feet of water on sills; total rise, 84 feet.

Repairs and Renewals.

The structures on the Soulanges canal being still comparatively of recent date do not as yet require a large amount of repairs to be kept in proper working order.

There is therefore nothing of importance to be recorded under the above head. Most of the work done on this canal during the year having been performed under the head of income as described below.

INCOME.

Wharf at Lower Entrance.

Under an agreement entered into between the department and the Harwood estate it had been the practice of late to moor barges loading stone, from a quarry on the

Harwood property along the north side of the entrance pier here, where they were in the way of vessels coming in and out of the lower lock. It was therefore decided to provide a wharf for these stone barges in the bay to the south of the canal entrance.

This pier is 200 feet long, 20 feet wide, for a length of 50 feet and 16 feet wide in the remaining portion of its length. The top is level at a height of 15 feet above low water mark for 50 feet and then slopes down to 9 feet above low water at the shore end.

The pier is of cribwork, built solid from end to end, the depth of water at the outer end being nine feet at summer level.

The space between the shore and the pier as built is being used as wasting ground for the canal quarry and will be filled up before long, easy access to the wharf from the quarry being thus provided. In the meantime an inclined trestle is being used to get on the wharf.

This work was done under contract by Messrs. Quinlan & Robertson.

Lodgings for Electricians.

Plans and specifications for three lodgings for the canal electricians were prepared during the year and the contract for the same awarded to Mr. Th. Belanger of Valleyfield, in the fall.

The excavations for the cellars and the foundation walls were done by the canal staff in September last, but nothing had been done by the contractor on the 1st of April, except the delivering of the materials on the ground.

Gasolene Tug.

The contract for the twine gasolene engines for this tug was awarded to the Valleyfield Engine Works last winter.

The machines were not quite ready for delivery at the end of the fiscal year.

These engines are of the four cycle type with 4 cylinders each, reversible clutches pump spark igniters, &c., and are guaranteed to develop 25 brake horse-power each.

The hull had been built during the fiscal year 1905-6.

Ladders in Lock Sluice Wells.

Iron ladders were inserted during the winter in the walls of the sluice well at each of the locks on this canal.

In connection with this and future work of the same nature an air compressing plant and two drills were purchased. Considerable economy will be realized by the use of these appliances.

Power House and Shops.

Minor alterations were made in the electric power house and at the shops, such as the replacing of ordinary knife switches by oil switches, changing the mode of wiring, installing new transformers and changing motors from temporary to permanent positions.

Ditches.

A large amount of stoning and sodding of ditch slopes was done during the year. The greater part of this work was at Tremblay's gully, and on the ditch along the north side of the canal from lock No. 3 upwards.

BEAUHARNOIS CANAL.

Length, 11¼ miles; 9 locks, 200 x 45 feet; 9 feet of water on sills; total rise 82½ feet.

This canal is only being used for a few market boats and stray barges. The staff has been reduced to one man at each lock and isolated bridges and the three men in charge of ferries.

Repairs and Renewals.

The chief items of work performed here under this heading during the year may be summarized as follows :—

Renewing a number of beams in the swing-bridge at Valleyfield and laying a new floor, also renewing the flooring of the bridge between St. Timothy and Grande Ile.

Placing new foot bridges on several lock gates, the timber used here was oak from spare lock gates which had been submerged in the canal a number of years ago.

Renewing roofs of lock houses Nos. 11 and 12, macadamizing two miles of road along Hungry Bay dyke.

Overhauling telephone line and purchasing new instruments.

Replacing old timber valves in waste weirs Nos. 2, 3, 4, 5, 6, 7 and 8 by sheet iron ones.

Building 500 feet of dry wall on the north side and 100 feet on the south side of the entrance at Valleyfield.

Quarrying a large quantity of stone for macadam and crushing the same.

Replacing timber bridges at 14 farm crossings by stone structures. This work was commenced in 1905-6.

Repairing Leak in Canal Bank above St. Timothy Bridge.

A deep bed of boulders lies here diagonally across the channel. The clay covering had been gradually washed away and in November the water found its way through it under the north bank, which at one time seemed to be in danger of being carried away. The canal was unwatered and repairs commenced at once, a trench being cut through the bed and filled with good puddle clay. The work will be completed during the present spring.

INCOME.

Weir in the Hungry Bay Dyke at St. Stanislas.

In order to comply with the requirements of a certain proces-verbal for a new water course in the parishes of St. Barbe and St. Stanislas, the Hungry Bay dyke was cut through last fall and a culvert built. This structure which is of concrete extended the full width of the roadway with a cross section of 6 x 5. At its upper end checks are provided in the side walls to receive stop-logs. These logs are to be placed in every time the Lake St. Francis waters reach such an elevation as to flood the farms to the south of the dyke. At all other times the opening is to be kept open in order to allow the surface water on the farms to find its way to the drain along the St. Barbe dyke lately built by this department.

The work here described will reclaim a large area of wet land which had been unutilized for years.

CHAMBLY CANAL.

Length, 12 miles; 9 locks, 118 x 22½ feet; 6½ feet of water on sills; total rise 74 feet.

Repairs and Renewals.

The principal items of work performed under this heading during the year were as follows :—

1st. Building a pair of gates for lock No. 2 and taking apart a number of old gates which had been kept under water for some time.

2nd. Renewing the timber approaches to bridges 2, 5, 6 and 7.

3rd. Overhauling long wharf at the Chambly entrance and repairing wharf at the Chambly Canton; also providing two floating platforms in the St. Johns entrance for the convenience of boatmen.

4th. Cleaning, widening and deeping about 9,000 lineal feet of ditches on both sides of the canal and lining the slopes of the deepest ones with stones, notably the ones at the foot of St. Therese island and at Denault's farm on the east side.

5th. Repairing a culvert at McNally's farm which had given way during the summer. This culvert which is of timber will have to be rebuilt next year.

6th. Renewing guard houses at locks 7 and 8 and at bridge No. 3. The new houses present a very neat appearance and are much more comfortable than the old ones.

In addition to the above, considerable work was done in keeping the banks, roads, lock and lock gates, buildings, fences, shops, &c., in good order.

INCOME.

Strengthening Bank at Ste. Therese.

This work, which had been commenced in 1905, was continued during 1906-7, some 1,300 cubic yards of wall being built from May to November. There still remains a length of about 1,000 feet to be treated in the same manner.

MACADAMIZE.

Road West side of Canal.

The macadamizing of the remaining 600 feet of the public road along the west side of the canal between St. Luc and the town of St. John was completed last fall. The total length of macadam laid in the last four years is 2¼ miles.

Macadamizing Towpath.

This work will be practically completed next summer. During last year about 2½ miles of roadway were done, except the rolling of the metal which will be performed in June and July next.

Guard House at Bridge No. 7.

A new guard house was erected at bridge No. 7. It is a 24 x 24 feet, one and a half story building with extension kitchen.

ST. OUR'S LOCK.

Length of canal, ½ mile; one lock, 200 x 45 feet; 7 feet of water on sills; total rise, 5 feet.

Repairs and Renewals.

The various structures on this canal were kept in good repair throughout the year, the principal items of work performed being as follows :—

All the old booms above and below the lock were overhauled and such of the timber piers as are not to be rebuilt in concrete during the coming fiscal year put in a safe condition for the present season of navigation.

A new and spacious shed was erected on the east side of the lock for receiving freight as well as for housing towing horses.

INCOME.

The old cribwork piers on the east side of the upper entrance, five in number, were taken down to the low water mark and rebuilt with concrete and some 300 feet of the guide booms spanning the spaces between the piers were also renewed.

All of the structures in the upper entrance to the lock are now of a permanent nature, and their maintenance will only require slight expenditure for a number of years to come.

CARILLON AND GRENVILLE CANALS

Carillon Canal.—Length, ¾ miles; 2 locks, 200 x 45 feet; 9 feet of water on sills; total rise, 16 feet.

Grenville Canal.—Length, 5¾ miles; 5 locks, 200 x 45 feet; 9 feet of water on sills; total rise, 43¾ feet.

Both of these canals are under one overseer. They are separated by a stretch of navigable river about five miles long and between them is to be found the old Chute à Blondeau lock, which was abandoned at the completion of the dam at the head of the new Carillon canal in 1883, the rise at the old lock having been practically obliterated.

Repairs and Renewals.

No repairs or renewals of great importance were done here during the fiscal year just expired.

The chief items of work performed were as follows:—

Completing the new carpenter shop.
Repairing lock walls and lock gates.
Renewing the top portion of piers 1 and 3.
Repairing booms.
Building two scows.
Hanging a pair of new gates on lock No. 3.
Repairing canal banks and slope walls.
Building a drain at Derricks farm, Stonefield.

INCOME.

Grenville Wharf.

This work was completed during the year by the placing of waling pieces on the face of the concrete walls and by the cleaning and widening of the basin on the north side of the wharf.

Swing Bridge at Grenville.

The old wooden bridge at the foot of the guard-lock was replaced by a steel structure, the contractors for it being the Phœnix Bridge and Iron Works of Montreal.

The above works were supervised by Mr. J. F. Lemire, C.E., who also made a plan showing depths of water along the south shore of the Ottawa river, both above and below the Carillon dam, with a view to establishing the amount of power that can be developed at that point.

STE. ANN'S LOCK.

Length, ⅛ mile; 1 lock, 200 x 45 feet; 9 feet of water on sills; total rise, 3 feet.
Old lock still available, 200 x 45 feet; 6 feet of water on sills; total rise, 3 feet.

Repairs and Renewals.

Besides keeping both locks and other structures in good repair, the following works were performed here from July 1, 1906, to March 31, 1907:—

A new boom about 100 feet in length was built and placed in the gap between the end of the north wall of the upper entrance and the first guide pier above it.

Out of the six guide piers on the north side of the upper entrance two were entirely rebuilt from the top to one foot below low water line, and the rebuilding of the others was well under way at the close of the fiscal year.

SURVEYS, QUEBEC CANALS.

A considerable amount of work was done during the year in connection with surveys, investigations of claims, &c.

In a number of cases plans had to be prepared.

The electric installation on the Lachine canal, income and capital work on the Soulanges, Beauharnois, Chambly and St. Ours were supervised by Mr. L. S. Pariseau.

Income and capital work on the Lachine canal is under immediate direction of Mr. H. R. Lordly, while Mr. J. T. Lemire looks after the income work on the Carillon and Grenville canals.

Repairs to Vessels.

Besides the ordinary repairs required to keep the various vessels composing the dredging fleet in good condition, the following renewals and additions were made during the fiscal year just passed.

Dredge No. 2.—Putting in new smoke stack, new canvas cover on roof of upper cabin and one set of main hoisting clutches.

Derrick No. 2.—Putting in a new engine frame.

Tug *Frank Perew*.—Building new pilot-house, putting in new steel rudder and steam steering gear.

I have the honour to be, sir,

Your obedient servant,

(Sgd.) ERNEST MARCEAU,

Superintending Engr. Que. Canals.

QUEBEC CANALS.

STATEMENT of the closing of Navigation.

Names of Canals.	Closing.		
Lachine Canal	4th	December,	1906
Soulanges Canal	4th	"	1906
Beauharnois Canal	30th	November,	1906
Chambly Canal	30th	"	1906
St. Ours Canal	28th	"	1906
St. Anne Canal	30th	"	1906
Carillon and Grenville Canals	30th	"	1906

Fiscal year 1906-7 being made to close March 31, the dates of opening of navigation will for 1907 be inserted in statement for fiscal year 1907-8 only.

LACHINE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of New Lock No. 1 at lower entrance and New Lock No. 5 at upper entrance during the fiscal year ending March 31, 1907.

Months.	Lock No. 1, Lower Sill.				Lock No. 5, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1906.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	18	0	15	6	17	2	15	9
August	15	8	14	6	15	8	15	2
September	14	10	14	0	15	3	14	6
October	15	5	13	5	15	4	14	8
November	15	1	14	0	15	3	14	9
December	31	8	14	5	17	0	14	10
1907.								
January	28	1	23	7	17	1	14	8
February	27	0	24	6	17	2	15	0
March	30	6	26	0	18	8	14	1

SOULANGES CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 1 at lower entrance and Lock No. 5 at upper entrance during the fiscal year ending March 31, 1907.

Months.	Lock No. 1, Lower Sill.				Lock No. 5, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1906.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	18	8	17	5	16	9	16	8
August	17	5	17	0	16	8	16	4
September	17	0	16	7	16	7	16	2
October	17	0	16	7	16	6	16	2
November	17	0	16	7	16	5	16	0
December	19	7	16	9	16	5	16	1
1907.								
January	20	2	19	2	16	9	16	2
February	25	9	19	8	16	9	16	4
March	25	6	21	9	18	0	16	4

BEAUHARNOIS CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 6 at lower entrance and Lock No. 14 at upper entrance during the fiscal year ending March 31, 1907.

Months.	Lock No. 6, Lower Sill.				Lock No. 14, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1906.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	11	4	9	8	11	7	11	4
August	10	0	9	8	11	4	10	11
September	9	8	9	5	11	3	10	8
October	9	6	9	4	11	0	10	7
November	9	7	9	5	11	2	10	2
December	12	6	9	7	11	7	10	7
1907.								
January	18	0	11	4	12	0	10	8
February	22	0	16	10	12	1	11	2
March	21	0	13	10	12	10	11	1

CHAMBLY CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 9, at lower entrance, and Lock No. 1, at upper entrance, during the fiscal year ending March 31, 1907.

Months.	Lock No. 9, Lower Sill.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1906.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	12	0	10	6	9	7	8	6
August	10	6	9	2	8	9	7	10
September	9	6	8	6	8	1	7	2
October	9	4	8	3	8	11	6	11
November	9	6	8	1	8	1	6	6
December	9	6	8	4	8	3	7	10
1907.								
January	11	11	9	6	9	3	8	1
February	11	10	10	2	9	1	8	7
March	19	10	10	2	10	5	8	1

ST. OURS LOCK.

STATEMENT showing the depth of the river water on the mitre sills of St. Ours Lock during the fiscal year ending March 31, 1907.

Months.	Lock No. 1, Lower Sill.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1906.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	10	8	8	4	10	3	9	4
August	8	3	7	0	9	4	8	6
September	7	4	6	4	8	8	8	3
October	7	4	6	2	8	7	7	10
November	7	5	6	4	8	11	7	11
December	9	9	7	1	8	6	8	0
1907.								
January	11	2	9	0	9	7	8	7
February	12	0	10	7	9	2	8	8
March	19	0	11	2	15	2	8	8

GRENVILLE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 3 at lower entrance, and Lock No. 7 at upper entrance during the fiscal year ending March 31, 1907.

Months.	Lock No. 3, Lower Sill.				Lock No. 7, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1906.	Ft.	In.	Ft	In.	Ft.	In.	Ft.	In.
July	18	10	14	6	16	0	11	10
August	14	6	12	10	11	10	10	3
September	12	9	12	1	10	0	9	0
October	12	10	12	1	10	2	9	2
November	13	1	12	7	10	3	9	10
December	15	5	13	1	10	3	9	8
1907.								
January	18	10	12	11	10	5	10	0
February	23	6	18	1	10	0	9	2
March	23	4	17	0	15	6	9	2

CARILLON CANAL.

STATEMENT showing the depth of the river water on the mitre sill of Lock No. 1 at lower entrance, and Lock No. 2 at upper entrance, during the fiscal year ending March 31, 1907.

Months.	Lock No. 1, Lower Sill.				Lock No. 2, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1906.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	15	4	12	5	14	7	11	4
August	12	5	11	2	12	2	10	0
September	11	4	10	7	10	5	9	0
October	12	2	10	7	10	7	9	10
November	12	5	10	11	10	8	10	4
December	12	4	11	6	13	6	10	7
1907.								
January	12	7	11	6	13	10	13	4
February	14	5	12	3	13	0	10	4
March	17	5	12	5	15	4	10	0

STE ANNE LOCK.

STATEMENT showing the depth of the river water on the mitre sills of the Ste. Anne Lock, during the fiscal year ending March 31, 1907.

Months.	Lock No. 1, Lower Sill.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1906.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July	12	2	10	10	13	9	11	3
August	10	9	10	0	11	2	10	2
September	10	2	9	8	10	1	9	5
October	10	2	9	9	10	0	9	6
November	10	3	9	8	10	3	9	11
December	12	4	9	7	10	9	10	1
1907.								
January	12	10	11	4	11	2	10	2
February	12	5	11	1	12	4	11	3
March	14	2	10	4	14	10	11	1

LACHINE CANAL.

STATEMENT of Fines and Damages, for the fiscal year ending March 31, 1907.

Date.	Name of Vessel.	Name of Owners.	Fine.	Damages.	Remarks.
1906.			$ cts.	$ cts.	
May 30..	Str. *Wahcondah*.....	New Ontario SS. Co.	.....	3,900 76	Damages to upper gates lock 2.
June 20..	" *Orion*..... ...	G. S. Thom.	.....	1,260 39	" " 4.
Aug. 28..	" *Dundurn*..	R. O. and A. B. MacKay.	.....	1,088 67	Damages to four gates lock 4.

SOULANGES CANAL.

STATEMENT of Fines and Damages for the fiscal year ending March 31, 1907.

Date.	Name of Vessel.	Name of Owners.	Fine.	Damages.	Remarks.
1906.			$ cts.	$ cts.	
Sept. 4..	Str. *Turret Crown*...	Turret SS. Co	....	*100 00	Damages to coping, lock No. 5
Nov. 23..	" *Keefe*.....	Great Lakes and St. Lawrence Co.	.....	100 00	Damages to coping of guard gate.

*Deposits made.

ST. LAWRENCE DISTRICT.

SUPERINTENDING ENGINEER'S OFFICE,
CORNWALL, April 1, 1907.

SIR,—I beg to submit my annual report upon works of construction and survey, in connection with the enlargement of the St. Lawrence Canals, for the fiscal year ending March 31, 1907.

RAPIDE PLAT CANAL.

Morrisburg Power Plant.

A lease was granted on February 23 last, to the corporation of the village of Morrisburg, for the purpose of generating electrical power and transmitting the same for lighting and manufacturing purposes, to the extent of eleven hundred (1,100) horse-power.

In this connection a contract was entered into between the corporation of Morrisburg and Mr. Wm. Birmingham, contractor, for the construction of sluiceways or supply weir and a power-house, the nature of the work being subject to the approval and supervision of the government engineer.

This work was commenced on May 11, 1906, and is now almost completed and ready for operation.

GALOPS CANAL.

Iroquois Section.

The contract for this work was awarded to Messrs. Larkin & Sangster. The work commenced on May 20, 1897, and was completed in November, 1902.

The final estimate was returned on October 31 last. The final plans, diagrams and detail calculations are being copied and will shortly be completed.

Upper Entrance.

This contract was awarded to Messrs. Murray & Cleveland in November, 1888. The works of construction proceeded with during the past year, are as follows :—

Earth Excavation.—The dredging operations were resumed on June 29, 1906, and carried on to July 10, 1906, when the dredge was removed to the North Channel. They were continued again on November 7 and stopped on December 1 for the season owing to the severity of the weather.

Two watering places, one at McLaughlin's Hill, and the other below the Guard Lock, were constructed.

Masonry.—A protection wall was constructed on the north side, at the upper entrance of the canal. As originally designed, this protection wall was to be a heavy dry masonry wall, but, owing to the difficulty of securing and cutting the necessary face stones in time to complete the work last season, the contractor was allowed to substitute concrete and stone, at the specified price for dry masonry.

This work was completed on November 21 last, and shows at the present time to be in perfect condition.

A masonry beam culvert (12-foot span) was constructed on the north side of the canal at McLaughlin's creek and connections made with the stone protection east and west of same.

Broken stone and concrete, four (4) feet wide was placed in rear of the coping of the walls of the new lock on September, 1906, and in November the levelling and the trimming up around the lock was commenced, and discontinued on December 1, owing to the severity of the weather.

Stone filling.—Around the icebreaker of the Upper Entrance pier, to form a protection for the heavy ice shoves which occur every spring, heavy blocks of stone were placed, while these proved to be of great benefit a number of them were dislodged this spring by the heavy floes; a more permanent method of protecting the end of the pier will require to be adopted; already two or three stones in the footing course of the icebreaker (laid dry) were torn out by the ice. Unless something is done it is likely that in the course of time the whole of the icebreaker will suffer materially.

Sweeping.—In September last the whole of the prism of the canal between the new lock and the upper entrance was thoroughly swept to one foot below the mitre sill of the Guard Lock, and the result revealed that a considerable amount of cleaning up required to be done to complete the work, though no obstructions to navigation were found, except the blasted rock lying along the toe of the north side of the channel at the Upper Entrance, the removal of which will receive immediate attention.

The work now remaining to complete this contract consists, as follows :—

Trimming and sodding of bank and slopes on north side of canal from McLaughlin's creek culvert to upper entrance, a distance of about 2,100 lineal feet; stone protection on the north side east of the Guard Lock, for a distance of about 640 lineal feet; the final levelling up of the filling between the new Guard Lock and the weir and the surface to be sodded; a service bridge to be placed over culvert at McLaughlin's creek; a small quantity of stone filling and stone protection to be placed

at west end of detached cribs across Round Bay, to form connection with shore; a small quantity of blasted rock to be removed by dredge at toe of slope on the north side of the upper entrance, and the final cleaning up of the prism by dredge throughout the entire section.

There also remains to be done about 2,700 lineal feet of fencing, and a small quantity of stone blocks to be placed for the protection to the icebreaker at upper entrance pier.

Good progress is being made with the work of preparing the final estimate.

Removal of Shoals in River West of Upper Entrance of Galops Canal.

In September and October last a survey was made to ascertain the nature and extent of the work to be done to render the channelway west of the Upper Entrance to the canal safe for vessels navigating the river.

Soundings were taken and a plan and estimate were prepared and forwarded to the department. An appropriation for the work was granted and tenders will be called for as soon as possible for the prosecution of this work.

North Channel.

The contract for this work was awarded to Mr. M. A. Cleveland and was commenced on May 14, 1897.

Earth excavation.—The dredging operations were resumed on July 11, 1906, on the south side of channel above Drummond Island, and continued there at intervals until August 28, when the dredge was moved to the north side above Spencer's Island, casting material for forming a toe to stone protection to slope in rear of the concrete and stone wall, thus forming a beach or long flat slope to said protection. This work continued until September 22 and then resumed work on south side of channel above Drummond Island and completed the widening of prism on November 7.

Cribwork.—From July 3 to 7, eight (8) cribs 30 x 20 feet were sunk in place at head of Spencer's Island, the closing crib was sunk in place on October 16, one crib 30 x 20 feet for the substructure of a mooring pier at Drummond Island was sunk in place on October 24 between Spencer and Drummond islands, two ice-arresting cribs, for the purpose of protecting the stone protection on the slope of the channel east, were sunk in place on October 24 and 25, thereby completing this class of work on the section.

Concrete and stone masonry.—The work of placing a concrete and stone wall on top of the cribwork above Spencer's Island, and the building of an icebreaker on top of the lighthouse crib was commenced on July 30, and completed on August 28.

At the head of Spencer's Island the remaining portion of this work was completed on October 23.

From November 2 to 23 a concrete superstructure was placed on top of the ice arresting cribs between Spencer and Drummond islands.

British Columbia pine.—Stringers were placed in front of the concrete and stone wall at head of Spencer's Island from Sta. 87+50 west.

Also on the superstructure of the two ice-arresting cribs between Spencer and Drummond islands.

Stone filling.—In addition to the ballast in the cribs at the head of Spencer's Island and on the ice-arresting cribs between Spencer and Drummond islands, a large quantity of filling was done in rear of the wall above, and at the head of Spencer's Island. The levelling of this filling will be completed without delay.

It was expected that the greater part of the work remaining to be done on this contract would be completed by the end of this season, but, owing to the inclemency of the weather and the general high water, this becomes impracticable.

The work now remaining to be done to complete the North Channel consists in closing a gap in the concrete and stone masonry on the south side of the channel at Drummond Island; building reinforced concrete arches over the two spillways on the north side of the channel; grading, levelling and sodding the slopes in rear of the cribwork at head of Spencer's Island; levelling up the filling in the icebreaker pier above Spencer's Island, and the general cleaning up of the section. The completion of this work will be prosecuted with as little delay as possible.

'GUT DAM.'

Concrete and stone masonry.—On July 25, 1906, the placing of a concrete and stone superstructure on top of the dam was completed.

The work now remaining to be done consists in completing the stone filling in rear of the dam and levelling the approaches on either side, and fencing in a small area of government property on Adam's Island adjoining the dam.

It was intended that the whole of this contract would have been completed by the end of the present fiscal year, but, owing to the scarcity of labour, the severity of the weather and the prevailing high water, operations were delayed. However, the small amount of work remaining to be done is now being prosecuted as rapidly as can be expected. The work on the final estimate for this contract is also being attended to.

GALOPS RAPIDS IMPROVEMENT.

This work has been under contract with the Gilbert Bros. Engineering Company, Limited, since September 25, 1897.

During the past season the work performed is as follows :—

Lower bar dredging.—The work of removing the bank of loose rock accumulated ahead of the dredging, within the limits of the channel, was completed so far as sounding indicated, on July 6, 1906. The contractor's plant was immediately removed from the channel and preparations for testing by sweeping the entire work begun on July 3, and were completed on July 16.

Testing channel.—The testing of the channel and its approaches commenced on July 17 and was completed on August 15. Many projections above the grade line were found. These projections were subsequently removed from North, Caledonia and Island Shoals and Lower Bar.

North and Caledonia Shoals.—Owing to the reduction in the level of the water surface on these two shoals, it was found necessary to reduce the level of the grade line six (6) inches, during the course of removing the points above the grade line.

Removal of obstructions.—The work of removing the points projecting above the grading on the above mentioned shoals commenced on August 23, and after its completion, the areas over which points had been found above grade line were retested, all work being completed on September 30. The redredging and retesting was considerably delayed owing to the necessity of dismantling the testing apparatus when the tug was required for placing the dredge, and to refit the apparatus to the tug when testing was required on each shoal.

Upper Bar.—In testing the channel through the Upper Bar a great many points above the grade line were found, some of which being as much as two (2) feet above the required bottom. Though it was urged that these points be removed, instructions were given that no more outlay would be made on this work, and this part of the channel would have to remain in its present condition. The available depth of water over the high points on the Upper Bar is 10·60 feet at the lowest stage of the water

which has been known to occur on November 23, 1901, near the end of the season of navigation.

Western approach.—In roughly testing the western approach of the Galops Rapids channel, several places with less than 13 60 feet at low water were found.

Eastern outlet.—In testing the eastern approach or outlet of the channel, a sufficient depth of water was found to accommodate any vessel which can use this channel.

Profile of water surface.—On July 19 last, levels were taken over the water surface at intervals of 100 feet, or less, on the centre line of the channel through the rapids, giving a continuous profile of the water surface from the basin above the rapids to the pool below the same, in order to ascertain the probable depth of water available for navigable purposes. This profile was taken when the water in the river was at a high stage, and in order to arrive at a conclusive and satisfactory test, a profile will require to be taken when the river is at a low stage.

Navigable depth.—At the present high stage of the river, the points which govern the navigable depth of water in this channel are on Upper Bar, over which there is about 14·30 feet of water, and the extreme low water of 10·60 feet, noted on November 23, 1901, which, however, occurs at the latter end of the navigable season.

Buoying.—It is proposed to have the Department of Marine and Fisheries buoy out the channel at an early date.

Gauge.—For the guidance of navigators, a self-reading gauge will be placed on one of the guide piers at the lower end of the North Channel. This gauge will indicate the available depth of water in the Galops Rapid channel and enable masters of vessels to make up their minds as to which channel suits them best, *i.e.*, the Galops Rapid channel, or the channel of the upper entrance of the Galops canal leading to the river lock No. 28.

Safety of navigation.—Under the present conditions of the river water, it may safely be expected that from 13 feet to 15 feet of water can be obtained for navigable purposes through the Galops Rapid channel, except at such exceptional periods, similar to that mentioned above, when abnormal water occurs throughout the River St. Lawrence.

The work of preparing the final estimate for this contract is nearing completion.

In view of the fact that the government has decided that no more money would be granted for the work, the contractors are making preparations to dispose of all their plant.

I am, sir,

Your obedient servant,

L. N. RHEAUME,

Engineer in Charge of St. Lawrence Canals.

M. J. Butler,
Deputy Minister and Chief Engineer,
Ottawa, Ont.

SESSIONAL PAPER No. 20

ST. LAWRENCE CANALS.

OFFICE OF THE SUPERINTENDENT,
CORNWALL, ONT., April 3, 1907.

SIR,—I have the honour to submit herewith, the annual report on the maintenance and operation of the canals in the St. Lawrence district for the period ending March 31, 1907.

These canals were all operated throughout the season of 1906 without interruption to navigation, and without serious damage; and were closed on December 6, a season of 234 days, being the longest of which there is any record.

THE CORNWALL CANAL.

The back ditches running along and into the Tait, Martin and Marsh farms on the south side, and the Robertson and Tackaberry farms on the north side, were all cleaned out and kept in good running order.

During the summer noxious weeds were kept down by cutting. There are about 250 acres of canal banks and lands to be kept clean.

The heavy rains in the early part of the season affected the outer bank just west of lock 18 very seriously. It has always been a doubtful spot, and when a couple of small slides occurred after these rains, the bank was investigated and found saturated with water. In order to get rid of it, and to provide against a landslide in the future blind drains of a total length of 280 feet were put in. No sign of sliding occurred afterwards.

The telephone line was renewed to the extent of 100 new poles; further work along this line will be done from year to year until the whole line has been gone over.

Two of the black spar buoys in 'the lake' had slid out into deep water, and the third one had been broken off short. They were taken up and replaced by new ones in correct position.

All structures and machinery requiring painting were painted.

All the swivel bearings carrying the drive shaft for the gate mechanism were replaced with adjustable ones, calculated to take up the wear on the chain and chain wheel.

Two new top bridges were put on the gates at lock 19, and one at lock 20.

The weir bridge at lock 20 was refloored.

During the winter the old gates from lock 21 were rebuilt for spare gates and remodelled to meet present requirements of electrical machinery.

The foundation of a concrete transformer house, to replace a wooden one, burned, was put in, and the house will be finished the first thing the coming season.

Fifteen iron snubbing posts, set in a block of concrete, were put in along the north bank between Pitt street and Amelia street, and on the south side of old locks 15 and 16.

Mr. W. M. Leacy completed his contract for riprap and filling in around the foot of the canal. The work was well done, and the banks, roads and walks show up in good condition after a hard winter's test.

THE WILLIAMSBURG CANALS.

All the back ditches and farm ditches were cleaned out during the summer; also about 300 acres of canal lands and banks kept free from noxious weeds by cutting.

During the summer a fissure developed along the line of the municipal water pipe under the flume at Iroquois. It led under the retaining wall and out into the tail-race around the side of the power house.

The water in the flume was lowered and a pump put to work to keep the water in the pocket just below the weir valve down. Then this pocket, to an elevation higher than the top of the water pipe, was filled up with concrete, effectually stopping the leak.

On the outside, just below the 'lift lock,' the wash of the river had worn a considerable indentation in the canal bank. A heavy boulder toe was put in to strengthen the bank and prevent the wash. Levelling and rimming at lock 24 was completed and a concrete backing put in; also three iron snubbing posts set in concrete blocks.

Since the enlargement of the canal, the old lock at Iroquois is cut off from the navigable canal. It serves as a tailrace for the overflow weir, so must be maintained in good condition. The old gates on it were dismantled and taken down, and all the walls and wing walls carefully gone over and pointed.

A reinforced concrete bridge 22 feet wide and 6 feet long was built across the back ditch opposite the weir at Iroquois.

Minor damages were done to the northeast entrance pier at Farran's Point on two occasions. These were repaired and charged to the vessels doing the damage. The diminished amount of damage done to this pier during the last two seasons is very noticeable and it can only be attributed to more careful handling of vessels. While this entrance is not by any means an ideal one, it is being shown from day to day that it can easily be safely made by careful navigators.

Mr. John O'Leary carried on his contract for repairs to the south bank of the Galops canal vigorously, and has it almost completed, a few thousand yards of earth, and a thousand lineal feet of riprap alone remaining to be done.

On November 20, 1906, a contract was entered into with Mr. Geo. Begy, to rebuild the retaining walls of the back ditch at Iroquois. The date was so close to the end of the season that there was no opportunity for work before the frost set in; but during the winter material was got on the ground in readiness for an early start in the spring.

THE MURRAY CANAL.

The banks and reserve lands here make a farm of 100 acres on which noxious weeds must be suppressed.

The work of maintaining the works on this canal was extremely light, and was successfully conducted without the aid of an overseer.

The ditches were cleaned, and the banks maintained in good condition, and a new watering place built on the north side near the Brighton road bridge.

Oak walings were placed on the abutments and retaining walls on the south end of the bridge at the Smithfield road and the Trenton road.

The bridgeman's residence at the railway bridge was thoroughly overhauled and put into an excellent state of repair, a kitchen and woodshed, cistern, well and stable were built.

A verandah was built on the bridgeman's residence at Smithfield bridge, and the well repaired.

On October 20, 1906, a contract was entered into with Mr. R. Weddell to rebuild the superstructures of the entrance piers of concrete. The work was pushed along, and before winter put a stop to it, all the piers on one side at the eastern end had been torn down and eight of them rebuilt. During the winter snubbing posts, irons, fenders, beams, &c., were got out.

Statements of water levels, fines and damages and traffic are appended.

I have the honour to be, sir,
Your obedient servant,

W. A. STEWART,
Superintendent.

M. J. Butler, Esq., C.E.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

SESSIONAL PAPER No. 20

STATEMENT of Lockages on, and Vessels passing through, the St. Lawrence Canals, during the Season of 1906.

Canal.	Number of Vessels.			Lockages
	Down.	Up.	Total.	
Cornwall	2,220	2,407	4,627	3,285
Farran's Point	17	1,639	1,656	904
Rapide Plat	153	2,149	2,302	1,793
Galops	85	2,059	2,144	1,233
Lift Lock	1,613	428	2,041	1,499
Murray	361	409	770	

STATEMENT of Fines and Damages incurred on the St. Lawrence Canals during the Nine Months, ending March 31, 1907.

CORNWALL CANAL.

Structure.	Date.	Name of Vessels.	Damage.	Fine.	Name of Owner.	Remarks.
	1906.		$ cts.	$ cts.		
Excessive speed	July 28	*Prescott*		30 00	R. & O. Nav. Co.	Paid.
"	Sept. 1	"		30 00	"	"
Lock 17	Aug. 30	*Brockville*	54 75		"	"

WILLIAMSBURG CANAL.

	1906.		$ cts.			
Lock 22, Pier	Aug. 27	*Ceylon*	265 37		Calvin Co.	Unpaid.

MURRAY CANAL.

GRAIN passing through Canals, transhipped at:—

Kind.	Kingston.	Prescott.	Ogdensburg.	Total.
	Bush.	Bush.	Bush.	Bush.
Wheat	7,996,701	612,300		8,609,001
Corn	1,059,715	81,250	25,000	1,165,965
Barley	851,376	90,166		941,542
Flaxseed	2,783,120	629,720		3,412,840
Oats	1,853,766	372,942		2,226,708
Other grains	116,859	25,000		141,859
	14,661,537	1,811,378	25,000	16,497,915

RECORD OF HIGHEST AND LOWEST LEVELS OF WATER ON THE ST. LAWRENCE CANALS DURING THE NINE MONTHS ENDED MARCH 31, 1907.

Month.	Cornwall.				Farran's Point.				Rapide Plat.				Galops.				Lift Lock.		Murray.	
	Lock 21.		Lock 15.		Lock 22 Lower.		Lock 22 Upper.		Lock 23.		Lock 24.		Lock 25.		Lock 27.		Lock 28.			
	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.
1906.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft	Ft.	Ft.	Ft.	Ft.	Ft	Ft.	Ft.	Ft.	Ft.
July	16·1	15·8	15·3	16·0	18·4	17·7	19·1	18·6	18 1	17·8	17 7	17·4	20·9	20 1	16 8	16 4	17·6	17 2	13 9	13 6
August	15·9	15·4	16 1	15 6	18·0	17·2	18·9	18·0	18·0	16·0	17 6	16·4	20·8	19·5	16·7	15·6	17 2	16·2	13·9	13 2
September	15·6	15 3	15·9	15·2	18·0	16·9	18·7	17·6	17·7	16 7	17·3	16 0	20 2	19·0	16·3	15·0	17·0	16 0	13·3	12·0
October	15·5	15·2	15·8	15·0	18·1	16·9	18 7	17·5	18·3	16 3	18·3	15·5	21·5	18·5	17·5	17 0	18·4	15·2	13·0	12 8
November	15·8	14 8	16 0	14·9	17·9	16·8	18·6	17·4	18·0	16 5	17·7	15·6	21·3	18·6	17·2	15·1	18·2	15·4	13·0	12·6
December	19·0	14·9	15·9	15·1	17·8	16·8	18·6	17·6	17·3	16·3	17 0	14·7	19·9	18·1	16·1	14·9	16·8	15·0	13 1	12·6
1907.																				
January	21·7	16·1	16·5	14·6	18·9	15 7	19·6	16·1	18 0	14 7	17·2	13·5	20·5	15·5	16·6	14·6	17·2	13 0	13 9	13 0
February	29 6	24·0	16·0	15·0	18·8	17·5	19·6	18·1	18·4	16·9	16·8	15 8	20·1	18·5	16 0	15·5	16·6	15·7	14 0	13 7
March	30·1	18·8	16·8	15·0	18 7	17·1	19·4	17·7	18·5	16·7	18·0	16·0	21·2	18 8	16·8	15·4	17·8	15 9	14·0	13·4

WELLAND CANAL.

SUPERINTENDING ENGINEER'S OFFICE.
ST. CATHARINES, March 31, 1907.

SIR,—I have the honour to report upon the maintenance and operation of the Welland canal and its branches for the fiscal year ending March 31, 1907.

The canal was closed for navigation on December 17, 1907.

One serious accident occurred during the year. The steamer *Nipigon*, bound up, July 21, 1906, carried away the upper gates and one lower gate of lock No. 16, and both the upper gates of lock No. 15 which were being closed at the time. All of these gates were badly damaged. The cost of making repairs amounting to $4,792.50 was paid by the steamer. Navigation was delayed for 42 hours.

Improvements to Canal.

Messrs. Magann & Phin completed their contract for 'Deepening certain portions of the summit level.'

Mr. J. Battle completed his contract for placing 'Stone protection' on certain portions of the summit level where the old stone has washed away.

Mr. Joseph Battle commenced work last fall building a concrete retaining wall portions of the summit level where the old protection had washed away.

Mr. Joseph Battle commenced work last fall building a concrete retaining wall on the east side of the rock cut at Ramey's Bend, and is pushing the work vigorously this spring.

Mr. E. Conroy, who undertook the contract of renewing the superstructure of the east pier at Port Maitland has not as yet started work, but a quantity of the timber required has been delivered. The heavy storms of last fall and winter on Lake Erie did considerable damage to the pier, and the renewal work will be much more extensive than anticipated.

Mr. M. J. Hogan, under contract for building culvert, dock and turning basin at Welland has made good progress, and is now pushing the work energetically.

The lock gate operating machines have not yet been installed, but tenders are now being invited for the necessary machines, motors, &c.

The electric lighting plant has been in continuous operation.

PORT COLBORNE IMPROVEMENTS.

Messrs. Hogan & Macdonell have made some progress with the excavations in the harbour, and are now cleaning up the entrance between the breakwaters.

Mr. M. J. Hogan has nearly completed his contract for 'New docking along west pier.'

Messrs. Peter Lyall & Sons, the contractors for the elevator are getting their material on the ground, and will soon be ready to commence active work on the building.

OLD CANAL.

New concrete abutments were built last fall and the swing bridge formerly across the old canal at Allanburg has been placed in position at O'Neil's crossing in lieu of the old bridge which was very much dilapidated.

At Chippawa new concrete abutments have been built to replace the old wooden ones at the swing bridge. The wooden span at the south end of the bridge has been rebuilt.

A reinforced concrete bridge was built across the raceway at Lincoln avenue, and two others across the back ditch of the feeder near Marshville in place of the old wooden structures.

GENERAL.

The upper mitre sill and about 30 feet in length of the foundation of lock No. 4, on the new canal, were renewed this spring, concrete being substituted for the old timber foundation. The wall on the north side of the lock was found to be badly undermined by the action of water. Temporary repairs were made to the lower mitre sill platform, which it is hoped will carry safely till next spring, when it will be replaced as well as the remainder of the lock foundation.

No employees were superannuated during the year.

The following superannuated employees died during the year :—

Charles Hannah, on September 5, 1906.
Robert Boyle, on November 5, 1906.
John Howe, on December 29, 1906.
James Cogan, on February 8, 1907.
W. H. Charles, on February 24, 1907.

Attached is a statement of moneys collected for damages caused to canal property by different vessels, also a statement showing the highest and lowest recorded depths of water on the mitre sills of the locks at Port Dalhousie and Port Colborne for each month of the year.

The water in Lakes Erie and Ontario has kept well above normal during most of the year, and vessels have had no trouble on account of low water, except a few of those which load deeply and lighten part of their cargo at the Grand Trunk elevator at Port Colborne.

I have the honour to be, sir,
Your obedient servant,
(Sgd.) J. L. WELLER,
Superintending Engineer.

M. J. BUTLER, Esq.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Ont.

WELLAND CANAL.

STATEMENT of damages to Welland Canal property during the fiscal year ending March 31, 1907, and the amount paid on account of said damages.

Date of Damage.	Name of Vessel.	Amount of Damage.	Amount Paid.	Date Paid.	Where Paid.
1906.				1906.	
May 6	Str. A. D. Davidson.	$ 26 06	$ 26 06	Nov. 3	Pt. Dalhousie.
July 6	" John Sharples	13 83	13 83	Aug. 21	"
" 21	" Nipigon	4,792 50	4,792 50	July 23	Pt. Colborne.
Aug. 7	" J. H. Plummer	121 93	121 93	Sept. 13	Pt. Dalhousie.
" 15	" John Lambert.	13 49	13 49	Nov. 8	"
Sept. 7	Tug Seymour	10 00	10 00	Sept. 13	"
" 13	Str. A. D. Davidson	17 45	17 45	Nov. 3	"
" 17	" W. J. Haskell	6 37	6 37	" 8	"
Oct. 4	" Algonquin	12 99	12 99	" 4	"
" 5	" Meringo	15 24	15 24	" 8	"
" 13	" John Sharples	17 74	17 74	" 21	"
" 17	" Robt. Wallace	13 07	13 07	" 21	"
" 24	" Simla	41 90	41 90	" 26	"
" 24	" W. J. Haskell.	8 08	8 08	Jan. 18	"
Nov. 1	" Chippawa	45 00	45 00	Nov. 2	"
" 1	" Neebing	15 50	15 50	" 21	"
				1907.	
" 13	" Averell	8 08	8 08	Jan. 18	"

WELLAND CANAL.

STATEMENT showing the highest and lowest depths of water on the lower mitre sill, Lock No. 1, New Welland Canal, Port Dalhousie, for the fiscal year ending March 31, 1907.

Months.	Lower Sill.		Months.	Lower Sill.	
	Highest.	Lowest.		Highest.	Lowest.
1906.	Ft. In.	Ft. In.	1907.	Ft. In.	Ft. In.
July	16 8	16 4	January	16 5	15 8
August	16 5	15 11	February	16 6	16 2
September	16 2	15 6	March	16 7	16 3
October	15 9	15 5			
November	15 11	15 6			
December	15 9	15 5			

STATEMENT showing the highest and lowest depths of water on the upper mitre sill, Lock No. 27, New Welland Canal, Port Colborne, for fiscal year ending March 31, 1907.

Months.	Lower Sill.		Months.	Lower Sill.	
	Highest.	Lowest.		Highest.	Lowest.
1906.	Ft. In.	Ft. In.	1907.	Ft. In.	Ft. In.
July	15 5	14 4	January	19 11	14 0
August	15 4	14 4	February	16 1	13 11
September	15 1	13 9	March	16 6	13 10
October	16 6	13 6			
November	16 3	13 10			
December	17 3	14 1			

SAULT STE. MARIE CANAL.

ENGINEER'S OFFICE,
SAULT STE. MARIE, ONT., May 9, 1907.

SIR,—I beg leave to submit my annual report upon the improvements in progress of construction to the entrance of the Sault Ste. Marie canal.

EXTENSION OF THE SOUTH PIER UPPER ENTRANCE.

Messrs. O'Boyle Bros. completed their contract for building an extension to the south pier at the upper entrance. This new extension, which has a concrete superstructure, is 800 feet long and has a width of 25 feet, with the exception of the outer end where the width was made 30 feet for a length of 75 feet. The pier was run into twice during construction and repairs to the damage sustained were made by the contractors.

After completion it was again run into by the large steamer *Hoover & Mason,* of 5,841 tons burthen and cargo of 10,416 tons. The steamer was going eastward and about to pass the steamer *Russia,* making westward. The channel at this point had been narrowed down to allow space for dredging operations, and the cross current at the end of the pier made it difficult to navigate under the circumstances.

It has been decided to build a further extension for a distance of 40 feet on to the end of the new extension, which will be better able to resist contact with a large steamer should it be run into.

A stone protection bank under contract with Mr. C. S. Boone is being placed at the back of the new extension, to provide further resistance should the pier be again run into.

DREDGING UPPER ENTRANCE.

Mr. C. S. Boone continued work under contract for the deepening and widening of the channelway at the upper entrance. The work lying between the entrance piers and in the vicinity of the canal beacon is drawing towards completion. The contractor was much delayed by having to move from position to allow boats to pass and from damage sustained to his plant by being run into on several occasions. The work lying towards the western end of the approach and which is known as the Vidal shoal, was started in September, 1906, and good progress was made for the time work was in operation.

I have the honour to be, sir,
Your obedient servant,
F. B. FRIPP,
Engineer in Charge.

SAULT STE. MARIE CANAL.

SUPERINTENDENT'S OFFICE,
SAULT STE. MARIE, ONT., May 9, 1907.

M. J. BUTLER, Esq.,
Deputy Minister and Chief Engineer.

SIR,—I have the honour to report upon the maintenance and operation of the Sault Ste. Marie canal for the fiscal year ending March 30, 1907, as obtained from records and personal observation prior to and since taking charge as acting superintendent, January 30, 1907.

The canal was opened for traffic April 14 and closed December 22, 1906, having been in operation 253 days.

A comparative statement has been prepared, which is attached hereto, showing the operation and traffic of this canal from its first season up to the end of the fiscal year.

The presence of dredges in and about the upper entrance and the narrowing of the navigable channel for dredging purposes has in a way reduced the tonnage from what it might have been, although a substantial increase is shown over the previous year.

On July 1 and 4, and September 2, 1906, the steamers *Harvey Coulby, D. M. Clemson* and *Hoover & Mason* respectively ran into the new pier at the south side, upper entrance, damaging the pier and moving the end of it about 2½ feet over. The channel at the time had been narrowed to half its width for dredging purposes, and the cross current at this point made it difficult for boats to navigate.

A daily exchange of vessel reports has been made, as in former years, with the St. Mary's Falls canal of the United States making it possible to keep up to date complete statistics of the traffic of the two canals. The following tables give the

traffic passing through the two canals at this point during the season of navigation for the years mentioned:—

Year.	Number of Vessels passed.	Registered Tonnage of Vessels.	Total Freight Tonnage.	Cost of Carrying per mile Ton.	Estimated Value of Freight carried.	Percentage of Freight carried in Canadian Vessels.	Number of Passengers.
1855	193	106,296	14,503				4,270
1860	916	403,657	153,721				9,230
1865	997	409,062	181,638				19,777
1870	1,828	690,826	539,883				17,153
1875	2,023	1,259,534	833,465				19,685
1880	3,503	1,734,890	1,321,906				25,766
1885	5,380	3,035,987	3,256,628				36,147
1890	10,557	8,454,435	9,041,213	1.3	102,214,948	3.5	24,856
1891	10,191	8,400,685	8,888,759	1.35	128,178,208	4.0	26,190
1892	12,589	10,647,203	11,214,333	1.31	135,117,267	3.8	25,896
1893	12,008	8,949,754	10,796,572	1.1	145,436,957	4.1	18,869
1894	14,491	13,110,366	13,195,860	.99	143,114,503	3.5	27,236
1895	17,956	16,806,781	15,062,580	1.14	159,575,129	3.75	31,656
1896	18,615	17,249,418	16,239,071	1.	195,146,842	3.	37,066
1897	17,171	17,619,923	18,982,755	.83	218,235,927	3.	40,213
1898	17,761	18,622,764	21,234,634	.79	233,069,739	2.2	43,426
1899	20,255	21,958,347	25,255,810	1.5	281,364,750	3.1	49,082
1900	19,452	22,315,834	25,643,073	1.18	267,011,959	3.	58,555
1901	20,041	24,626,976	28,403,065	.99	289,906,865	4.	59,663
1902	22,659	31,955,582	35,961,146	.89	358,306,300	4.	59,377
1903	18,596	27,736,444	34,674,437	.92	349,405,014	6	55,175
1904	16,120	24,364,138	31,546,106	.81	334,502,686	6.	37,695
1905	21,679	36,617,699	44,270,680	.85	416,965,484	5.	54,204
1906	22,155	41,098,324	51,751,080	.84	537,463,454	5.	63,033

IMPROVEMENTS TO CANAL.

Under Repairs.—The old section of the south pier at the lower entrance was levelled up and replanked; cement sidewalks on both sides of the locks were put in to replace plank walks, which add much to the appearance of the lock and grounds. Quite a large area of the grounds were levelled up from a rough condition by the small labouring crew kept on hand for general repairs, and adds to the general improvement of the canal grounds.

Under capital account.—During the latter part of the year Messrs. Wright & McPhail built, under contract, the lockman's shelter, a stone structure situated between the office building and the power-house, fronting the lock. Every satisfactory piece of work was executed and it only remains now to have heat, water and equipment put in to provide for the much felt requirements of the lockmen.

GENERAL.

The buildings have been kept in good repair and the efficiency of the machinery maintained. The annual painting of the buildings both inside and out has been done as usual.

Something should be done in the way of replacing the upper main gates with new ones. The gates now in use show further signs of weakness this year. Although spare gates, of old design, are kept on hand it would be better to replace those in use with solid timber ones of the same design as those of the main lower gates. The average depth of water on the mitre sill during the season of 1906 was 20 feet 6 inches, being the same as the previous year.

Provision has been made to level up and replank the upper entrance piers during the coming season, as soon as the dredging between the piers has been completed.

I have the honour to be, sir,

Your obedient servant,

F. B. FRIPP,

Acting Superintendent.

M. J. Butler, Esq., C.E.,
Deputy Minister and Chief Engineer.

SAULT STE. MARIE CANAL.

Comparative Statement since opening of Lock, September 9, 1895.

Season.	1895.	Increase or decrease over previous season.	1896.	Increase or decrease over previous season.	1897.	Increase or decrease over previous season.	1898.	Increase or decrease over previous season.	1899.	Increase or decrease over previous season.	1900.	Increase or decrease over previous season.
Period lock open	Sept. 9.. Dec. 6..		May 7.... Dec. 10...		Apr. 21... Dec. 14...		Apr. 11.. Dec. 9....		Apr. 26... Dec. 20...		Apr. 23.. Dec. 16...	
Canadian registered tonnage	125,240	.....	586,571	461,331	398,343	188,228	403,331	4,988	561,759	158,428	579,528	17,769
U. S. registered tonnage	623,131	.....	3,810,794	3,187,663	3,406,018	404,776	2,354,606	1,051,412	2,388,441	33,835	1,616,139	772,302
Total tonnage	748,371	.....	4,397,365	3,648,994	3,804,361	593,004	2,757,937	1,046,424	2,950,200	192,263	2,195,667	754,533
Lockages	698	.....	3,042	2,344	2,976	—66	2,520	—456	2,610	90	2,205	—405
Vessel passages	1,193	.....	5,189	3,996	4,376	— 813	3,712	—664	3,820	108	3,163	—657
Time passing lock	212 h. 27m	.....	984 h. 22m	771 h. 55m	684 h. 11m	300 h. 11m	609 h. 30m	74 h. 40m	643 h. 16m	33 h. 46m	541 h. 21m	101 h. 52m
Average time lockage	18 26 m.	.....	18.42 m.	.....	13 79 m.	.....	14.51 m.	.....	14.78 m.	.....	14.73 m.	.....

Season.	1901.	Increase or decrease over previous season.	1902.	Increase or decrease over previous season.	1903.	Increase or decrease over previous season.	1904.	Increase or decrease over previous season.	1905.	Increase or decrease over previous season.	1906.	Increase or decrease over previous season.
Period lock open	Apr. 20 Dec. 21.		Apr. 1 .. Dec. 20 ..		Apr. 2... Dec. 13. .		Apr. 30... Dec. 26 ..		Apr. 10... Dec. 20...		Apr. 10... Dec. 20...	
Canadian registered tonnage	776,331	196,803	1,366,087	589,756	1,616,385	250,298	1,557,335	59,050	1,799,336	242,001	1,959,186	159,850
U. S. registered tonnage	1,672,631	56,492	3,238,069	1,565,438	3,145,020	93,049	2,673,090	471,930	3,739,224	1,066,134	4,399,990	660,766
Total tonnage	2,448,962	253,295	4,604,156	2,155,194	4,761,405	157,249	4,230,425	530,980	5,538,560	1,308,135	6,359,176	820,616
Lockages	2,906	701	3,418	512	3,242	176	3,012	230	4,031	1,019	4,152	121
Vessel passages	4,243	1,080	5,169	926	4,418	751	4,092	326	5,853	1,761	5,913	60
Time passing lock	724 h. 38m	183 h. 14m	925 h 57m	201 h. 19m	883 h. 10m	42 h. 47m	811 h. 28m	71 h. 42m	1060 h. 38m	249 h. 10m	1131 h. 23m	70 h. 45m
Average time lockage	14.96 m.	.....	16 25 m.	.....	16.34 m.	.....	16.16 m.	.....	15.79 m.	.....	16.35 m.	.....

Note :

'Vessel Passages' includes rafts and unregistered craft.
'Time Passing Lock' includes detention time in lock.
'Period Lock Opens' means time first lockage and last lockage.
'Tonnage' in each case means net registered tonnage of craft.

DEPARTMENT OF RAILWAYS AND CANALS.

TRENT CANAL.

PETERBOROUGH, May 6, 1907.

SIR,—I have the honour to submit my annual report for the fiscal year ended March 31, 1907, covering the works of construction, chargeable to 'capital.'

SIMCOE-BALSAM LAKE DIVISION.

Hydraulic Lock No. 2.—The Dominion Bridge Company, contractors for the superstructure of the lock, have it practically completed. Construction operations were resumed this spring on March 25, and the lock will be ready for testing this month.

Section No. 2.—Messrs. Larkin & Sangster finished the works of this section last fall, with the exception of some minor work connected with the Fourth Concession road, township of Eldon, which will be finished this month.

Section No. 3.—Messrs. Brown & Aylmer practically finished the works of this section last fall. Some stone protection lining and sodding have yet to be done, all of which will be completed early in June.

Last fall the canal reaches between hydraulic lock No. 2, Kirkfield and Lake Simcoe, were filled with water up to normal navigation level, for the purpose of testing the dams, locks and banks, which all proved satisfactory.

The engineer's office at Gamebridge was closed last December, and the staff moved to Peterborough, where they have since been employed at getting out the final estimates of sections Nos. 2 and 3, the former of which is nearing completion.

HOLLAND RIVER DIVISION.

Section No. 1.—A contract for this section was entered into with the Lake Simcoe Dredging Company on April 30, 1906. With the exception of a little clearing the company have done no work. During the summer of 1906 they built, at Barrie, a pumping dredge, which was nearly finished at the close of navigation. It has not yet been towed around to the work, but the contractors expect to start dredging operations this month.

Section No. 2.—Plans and specifications of the works embraced by this section, which extends from Holland landing to Newmarket, have been prepared and are now ready for the letting of the work.

Queensville Road Bridge.—At the Holland river crossing of the side road between lots 115 and 116, township of East Gwillimbury, York county, a small swing bridge is being built. A contract for the construction of the substructure was entered into with Messrs. D. Conroy & Sons on December 1, 1906. Since then the piles for the foundations of the piers and abutments have all been driven, and it is confidently expected that they will have the substructure finished by the end of June. The Dominion Bridge Company have the contract for the superstructure, the steel for which is manufactured and ready for shipping at their bridge works, Dominion, Quebec.

ROSEDALE.

Last summer a survey of this locality was made with the object of preparing plans for a new lock and dam, including a canal across the narrow neck of land separating Balsam and Cameron lakes. The new lock and dam would replace the present dilapidated wooden structures, and the canal the tortuous channel up the Gull river at this point. The plans are in course of preparation.

BOBCAYGEON.

A survey was made last summer of the Little and Big Bob rivers, and the field data obtained for the preparation of a plan for a new dam at the lower end of the Little Bob river to replace the decayed wooden dam at this point. A plan of the rivers and island has been made and also a preliminary study of the dam.

BUCKHORN.

Last fall the field data for a new dam and bridge was obtained, and during the winter plans and specifications for the new structures were prepared, tenders for the construction of which are now advertised for.

I am, sir,

Your obedient servant,

(Sgd.) ALEX. J GRANT,

Superintending Engineer.

M. J. Butler, Esq.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals.
Ottawa, Ont.

RIDEAU CANAL.

Superintending Engineer's Office,
Ottawa, April 1, 1907.

Sir,—I have the honour to submit herewith my report on the Rideau canal for the nine months ending March 31, 1907—this date being the end of the present fiscal year.

As I stated in my last annual report, which covered up to June 30, 1906, the accident to the lower sill at Washburn lock had occasioned a delay of twelve days to navigation in June last.

The nature of the accident; and the method of repairing the sill were fully described in the above mentioned report; and I do not know that I can add anything more on this subject, except to state that the new concrete sill was laid by the end of June, after which it was allowed seven days to set, the lock being reopened for traffic at six a.m. on July 9; and as the 1st and 8th were Sundays, navigation was only suspended at Washburn from the 2nd to the 7th, both inclusive—a delay of six days.

This was the only delay to navigation throughout the canal, during the nine months ending March 31.

The spring freshet commenced on the 28th instant, and unfortunately much rain has fallen, which has largely increased the volume of water, and broken up the ice, which is very heavy this year on account of the severe and continued cold last winter.

The large apron below the west bulkhead at Hogsback has been wrecked by ice, and as far as can be seen at the present time, nearly all of it has been swept away.

Both bulkheads, however, I am glad to say, are uninjured.

This will be a serious item of expense in the year's estimates; as this apron must be rebuilt as soon as the water falls, and will cost five thousand dollars at the very least.

At Black Rapids lock, the centre bent of the waste weir has been carried away by the heavy ice, thus making it impossible to put in the two bents of stoplogs.

It will be necessary to build a coffer dam above the weir, to take the place of the stoplogs for the whole season of navigation; as the water will not permit the bent being rebuilt until next winter.

No other damage has been reported to me from any point on the canal; but the freshet is by no means over yet; nor has the ice all gone.

However, as the water has not risen since yesterday, but is at a standstill, I hope the danger point has been passed, and that the freshet will subside from now on.

The principal works and repairs executed along the line of the canal during the above mentioned period, are as follows:—

OTTAWA.

The roadways round the Basin were partly macadamized and repaired.

One pair of lock gates were renewed in lock 4.

Considerable filling was done behind the new cross walls at the foot of the locks, and this place is now nearing completion, when it can be graded and sodded to be in keeping with the rest of the station.

Some planking was renewed on the wharfs, and a new sidewalk was built along the front of the warehouses on the wharf lots on Canal street.

Sundry repairs were made to sluice frames, and the lower wing walls of lock No. 1 (in the Ottawa river) were pointed.

This was rendered possible by the extreme lowness of the river last autumn.

Considerable trouble was caused last summer on account of the accumulations of sawdust that came into the bay at the foot of the locks here from the Chaudiere mills; as on account of the lowness of the river, boats experienced great difficulty in ploughing through this sawdust when entering and leaving the locks.

Complaints were made to the department; and I understand that the mill men denied that they allowed any sawdust or mill refuse to fall into the river; but the presence of new sawdust, as well as slabs, edgings and mill refuse, cannot be denied; and several persons spent weeks on the river collecting the latter and piling it on the shores for firewood.

I would respectfully urge on the department the necessity of the enforcement of the law prohibiting any sawdust or mill refuse from being allowed to enter the river.

OTTAWA EAST BRIDGE.

The flooring and joists of this bridge were renewed, and sundry small repairs made to the bridge keeper's house.

BANK STREET BRIDGE.

Sundry small repairs were made to the turntable of the swing, and also to the bridge keeper's house.

CONCESSION STREET BRIDGE.

No repairs were made here.

HARTWELL'S.

A new house was built here last summer for the lockmaster, the old house having fallen into ruin, and having been condemned as unsanitary by the health officials.

Small repairs were also made to the plaster of the lock labourer's house.

Considerable repairs to the lock masonry are now in progress.

The upper wing wall on the west side, and both middle piers having become unsafe, are now being rebuilt.

A small cut-off wall is being built also at the head of the lock to protect the road from leakage from the cut, and a dry wall is to be built in the waste weir channel below the weir to prevent erosion of the bank.

All the above repairs will be finished by the 1st May next, by which date the canal is to be open for traffic.

Some stone lining was placed on the face of the canal next to the road, and small repairs made to the road itself.

HOGSBACK.

The lockhouse here, which was of the same description as the one at Hartwell's, and which had also sunk and fallen into very bad condition, was rebuilt.

Repairs are to be made to the lower sill of the lock, before May 1, next.

Small repairs were made to the tow path road and the canal bank, and small repairs made to the dam.

As stated above, the apron below the west bulkhead has been badly wrecked by the ice—in fact the greater portion of it has been carried away.

The existence of such a large apron below the weir is due to the fact that the rock below is of a very soft shaley nature, and flakes up with water, necessitating the protection of an apron.

This apron must be rebuilt during the summer; but at the present time the water is so high, that it is impossible to say how much of it is actually gone.

BLACK RAPIDS.

Sundry small repairs were made here to the station generally.

As stated above, the centre bent of the double weir has been broken away by ice.

The stoplogs therefore cannot be put in; and a temporary dam must be built to close the weir in order to keep the water up for navigation.

I do not anticipate any trouble in having this done by May 1.

LONG ISLAND.

Sundry small repairs were made to the By Wash, such as replanking, &c.

The piers below the same were rebuilt and filled with stone.

About fifty feet of close sheet piles 10-inch by 12-inch by 20 feet long were driven in front of the north pier of the waste weir to check the leakage that washes out the clay at this point.

This completes the sheet piling across the front of the weir.

MANOTICK BRIDGE.

Sundry small repairs were made to the bridge, and painting done by the bridge keeper.

WELLINGTON BRIDGE.

No repairs were required at this bridge.

BECKETT'S LANDING BRIDGE.

The swing bridge and approaches thereto were rebuilt during the winter, the travel being diverted across the ice whilst this was being done.

BURRITT'S RAPIDS.

The east pier of the retaining dam was rebuilt, and portions of the dam itself and also of the waste weir were repaired and sheeted with 3-inch plank.

Sundry small repairs were made to the embankments and to the station generally.

NICHOLSON'S.

The swing bridge crossing the upper lock was rebuilt, together with the timber approaches thereto.

Some new sluice frames were put in, and sundry small repairs made to the station generally.

CLOWES.

Very considerable repairs were made at this station to the waste weir, which was taken down and rebuilt with stone.

Owing to its proximity to the lock (and the south upper wing wall of the lock forms the north wing of the waste weir) the fact that the water had to be diverted through the lock itself, made it a very difficult matter to put in a tight coffer dam, as the current carried all the clay through the lock.

This, however, was remedied by laying bags of cement mortar in the water, and driving the sheeting of the coffer dam into them.

The freshet in January wrecked the coffer dam also; but I am glad to be able to report that this work—the most difficult to accomplish on the whole line of the Rideau on account of the water, has been finished successfully, and will not require any more repairs for a very great number of years.

MERRICKVILLE.

Sundry small repairs were made to the station in general.

The lower lock was to have been coffer dammed and pumped, in order for repairs to be made to the lower sill.

However, the high water, and the delays to the work at the last station, made it too late to attempt this work last winter.

The sill is in no danger, but leaks; and the repairs will be made immediately after the close of navigation this year.

KILMARNOCK.

Sundry small repairs were made to the station generally.

EDMONDS.

The waste weir at this station has been taken down and rebuilt; a very similar piece of work to that described at Nicholsons, as the water was extremely difficult to contend with, as it had here also to be diverted through the lock, and the cofferdam had to be built here also, and as there was very deep water above the weir this dam had to be built to stand a head of over 12 feet.

However, the work is finished now, and like the weir at Nicholsons, will not require any repairs for many years.

The upper lock gates are now being renewed; they are framed and are being put in place.

Sundry small repairs were made to the station generally.

OLD SLYS.

Sundry small repairs were made to the station generally.

SMITH'S FALLS COMBINED.

Some more foundry waste was placed on the south side of the basin.

This is being done gradually year by year, and the useless area of shallow water is being reduced and the leakage stopped.

Sundry small repairs were made to the station generally.

The lockmaster's house was to have been repaired last summer; but it was found to be so far decayed that I consider the only thing to do is to build a new house, as the present one is not worth repairing.

SMITH'S FALLS DETACHED.

Sundry small repairs were made to the station generally.

POONAMALIE.

Sundry small repairs were made to the station generally.

BEVERIDGES.

Two pairs of lock gates were renewed here, and will be completed and in place in the course of a few days.

Sundry small repairs were made to the station in general.

PERTH BASIN.

Sundry repairs were made to the planking of the wharfs in the canal basin, and also to the four swing bridges in the town.

Small repairs were also made to the culverts on the tow path road; and a considerable quantity of boulders and loose rock were removed from the channel by our diver, in the vicinity of Dowsons.

OLIVER'S FERRY BRIDGE.

Small repairs were made to the flooring and approaches of this long bridge.

THE 'NARROWS.'

Sundry small repairs were made to the station generally.

NEWBORO.

The piers below the lock are now being rebuilt down to low water mark; and will be completed before navigation opens on May 1 next.

Sundry small repairs were made to the station in general.

CHAFFEYS.

One new pair of lock-gates is to be put in here; they have been framed, and will be hung in place before May 1 next.

Sundry small repairs were made to the sluices and to the station generally.

DAVIS'S.

Extensive repairs were made to this station.

The lower lock-gates were renewed, and both lower wing walls were taken down and rebuilt.

As this is a single lock, cofferdams had to be built and the lock pumped to do this work.

Considerable repairs were also made to the floor of the bottom of the lock chamber, and the sides were grouted and pointed.

The lock is now in better condition than for many years.

JONES'S FALLS.

Repairs were made to the planking and approaches of the swing bridge.

Also sluices were repaired and small repairs made to the big dam and to the station generally.

MORTON DAM.

Repairs were made to the planking and hand railing of the dam; also to the side walls of the same.

UPPER BREWERS.

A new set of stop logs was framed for the upper lock.

The basin was cleaned out by our dredge and the material thus excavated was piled on the banks and spread thereon to strengthen them.

Small repairs were made to the sluices, and to the station generally.

LOWER BREWERS.

During the first week in July, 1906, navigation was delayed, as stated on the first page of this report, for six days, during which time the repairs to the damaged sill were being completed.

The repairs have proved most satisfactory.

The particulars of this accident are fully set forth in my report for the fiscal year ending June 30, 1906, and need not be repeated here.

Immediately after the close of navigation, the upper wing walls and east chamber wall of the lock were grouted.

Sundry small repairs were made to the station generally.

BRASS'S POINT BRIDGE.

Sundry small repairs were made to the planking of the bridge.

KINGSTON MILLS.

Sundry small repairs were made to the station generally.

Six hundred cubic yards of stone were quarried, furnished and spread where required on the embankments by Mr. Wm. Keenan.

GENERAL.

The Douglas fir dimension timber used in the lock gates and heavy structures, was purchased under contract with the Ottawa Lumber Company, the quantity being 124,735 feet B.M.

The Portland cement used amounting to 1,750 barrels, was purchased under contract with Messrs. W. McNally & Company of Montreal.

The white lead supply, amounting to 4,000 lbs., was purchased under contract with Messrs Clark & Lewis of Smith's Falls.

A new steam pumping plant was purchased last summer to replace the old engine and pump which were worn out, being thirty years old.

A six-inch centrifugal pump with a direct connected 6 x 6-inch vertical engine, was purchased from Messrs. M. Beatty & Sons of Welland, and a 14 horse-power, 7½ x 10-inch portable engine to furnish steam for the same (and also to run the old pump with a belt if required), was purchased from the Waterous Engine Company of Brantford.

This plant was used to pump the lock at Davis' last winter and worked admirably.

DREDGING PLANT.

The dredge *Rideau* was employed the whole of last summer in deepening the cut between Upper and Lower Brewers lock stations.

At the time of accident to the lower sill at Washburn (Lower Brewers) lock, I sent her to assist in making the coffer dam below the lock, where she did excellent service, both making and afterwards removing, the clay in front of the said coffer dam.

She has completed the cut now to the lock at Upper Brewers, and all the dredging at the western end of the canal has for the present been completed.

A contract has been entered into with the Polson Iron Works of Toronto, for the construction of a new tug to take the place of the *Shanly*.

This tug is to be delivered to us by May 15 next.

I have visited the Polson Works several times this winter, and can report good progress being made on the new boat.

A flat scow was built by our carpenters on the basin at Ottawa this winter, and is now nearly finished; the only work unfinished being a portion of the deck caulking.

This flat scow is 75 feet long, 25 feet wide, with a side height of 5 feet.

She is intended to carry lumber and stone for delivery along the canal, being towed by our own tug.

We have great trouble every year in having our dimension stone delivered to where it is to be used along the canal, as there are few persons who own barges or scows suitable for carrying these heavy stones, each of which weighs from 1½ to 3 tons, so that now we are independent of outside freighters and can deliver about 200 tons at a load on this new scow with our own tug.

I attach hereto a table, showing the highest and lowest water each month on the lower sills at Ottawa and Kingston Mills lock stations, respectively, from July 1, 1906, to March 31, 1907.

I have the honour to be, sir,

Your obedient servant,

A. T. PHILLIPS, *M.C.S.C.E.*,

Superintending Engineer.

M. J. Butler, Esq., C.E.,
Chief Engineer, Dept. Railways and Canals,
Ottawa.

RIDEAU CANAL.

Superintending Engineer's Office,
Ottawa, April 1, 1907.

Table showing monthly the highest and lowest water on the lower mitre sills of Locks Nos. 1 and 47, at Ottawa and Kingston Mills Lock Stations respectively, from July 1, 1906, to March 31, 1907.

Ottawa, Lock No. 1.				Kingston Mills, Lock No. 47.			
Highest.		Lowest.		Highest.		Lowest.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
July 1	14	8	July 30 31	9	0	July 9-18	9	0	July 1-2	8	10
August 1-2	8	11	Aug. 31	6	6	Aug. 1-3	8	11	Aug. 31	8	6
Sept. 1	6	5	Sept. 28	5	3	Sept. 1	8	6	Sept. 25-30	7	11
Oct. 31	6	4	Oct. 1	5	3	Oct. 30 31	8	1	Oct. 1	7	11
Nov. 29-30	6	6	Nov. 13-19	6	0	Nov. 1-2	8	1	Nov. 27-30	7	7
Dec. 1-4	6	6	Dec. 26-31	6	0	Dec. 24-31	7	10	Dec. 1-4	7	7
Jan. 1-9	6	6	Jan. 10-31	5	11	Jan. 29 31	8	8	Jan. 1	7	10
Feb. 1-9	5	11	Feb. 10-28	5	10	Feb. 20-28	8	10	Feb. 1-10	8	8
Mar. 31	14	7	Mar. 1-13	5	10	Mar. 1-15	8	10	Mar. 15-30	8	11

A. T. PHILLIPS,
Superintending Engineer.

St. Peters, C.B., March 31, 1907.

Dear Sir,—I have the honour to submit my annual report on the working and operation of St. Peter's canal, during the fiscal year ending March 31, 1907.

There has been no repairs done at St. Peters canal since my last report on June 30, 1906.

The canal lock gates track and rollers are in a very bad condition, also the flooring, which was put down in 1881; it has served its time and will require refloor-ing according to the marine divers reports. The floor has given away and it is impossible to place the castings on solid foundations; the track has to be continually shimmed up and only lasts for a short time in operating. We will have to do some ten days work this spring before we can operate our gates, and then it will only last for a few months' operation.

Navigation and traffic on canal is up to the general standard.

Navigation opened on April 23, 1906, and closed on January 15, 1907. During that time 1,419 steamers and vessels passed through canal, up and down.

There is one tidal lock and four pairs of gates on St. Peter's canal.

I have the honour to be, sir,

Your obedient servant,

JNO. H. DEVEREAUX,

Lockmaster.

M. J. Butler, Esq., C.E.,
Chief Engineer and Deputy Minister,
Dept. Railways and Canals,
Ottawa, Ont.

TRENT CANAL.

Peterborough, May 11, 1907.

Sir,—I have the honour to submit herewith my annual report of the maintenance and operation of the Trent canal for the year 1906-1907.

During the past year the work has been considerably added to by the taking over from the contractors, of the Balsam Lake—Lake Simcoe Division, which will now afford a straight stretch of navigation from Healey's Falls to Lake Simcoe, a distance of 160 miles; and the taking over of the booms and slides of that which was known as the Newcastle District, which were formerly under the management of the Department of Public Works.

Navigation closed on the several divisions as follows:—

Peterborough—Hastings Division—December 1.
Peterborough—Lakefield Division—November 10.
Lakefield—Burleight Falls Division—December 1.
Burleigh Falls—Kirkfield Division—November 20.

HEALEY'S FALLS.

The dam was repaired and new stoplogs provided.

TRENT BRIDGE.

The bridge was repainted and replanked.

HASTINGS.

The swing bridge was repainted and replanked.

RICE LAKE.

A new channel was dredged through the old Cobourg-Peterborough railway bed, making a direct steamboat route between Gore's Landing and Harwood.

BENSFORT.

The bridge at this point was repainted and replanked.

WALLACE POINT.

The bridge was repainted and replanked.

OTONABEE RIVER.

The shoals at Dangerfield were dredged and the channel straightened.

LITTLE LAKE (PETERBOROUGH).

The boom piers in the lake were all re-topped. The swing bridge was repainted and replanked.

LOCK NO. 6 (PETERBOROUGH).

The entrance to this lock was dredged. A new storehouse 50 feet x 35 feet, was erected at this point.

HYDRAULIC LIFT LOCK, NO. 1.

Extensive repairs were made to the reaches, and the banks were strengthened. New guard rails were placed on the pontoons and wall stairs.

REACH BETWEEN HYDRAULIC LOCK AND NASSAU.

The break that occurred in January of 1906 was repaired. The repairs, while in progress, caused a slight delay in the opening of navigation. About 100 feet of new bank were built.

WARSAW ROAD BRIDGE AND NASSAU BRIDGE.

New opening and closing apparatus for the guard gates at these points were placed in operation.

LOCK NO. 5 (PETERBOROUGH-LAKEFIELD DIVISION).

The lower entrance to this lock was dredged.

LOCK NO. 4 (PETERBOROUGH-LAKEFIELD DIVISION).

A new brick dwelling for the lockmaster was erected.

BETWEEN LOCK 2 AND 3, (PETERBOROUGH-LAKEFIELD DIVISION).

The rip-rapping of the banks was completed; the banks cleaned up, and the fences repaired and painted.

LOCK NO. 1 (LAKEFIELD).

The lockmaster's house was repaired and painted. The right of way to the property was fenced.

LAKE KACHEWANOE.

The channel was dredged and straightened between Lakefield and Young's Point.

YOUNG'S POINT.

A new concrete pier at the upper entrance to the lock was built. The pier is 400 feet in length. A new steel bridge was placed across the channel. The upper entrance to the lock was dredged.

STONY LAKE.

Owing to the fact that it was in the interests of navigation to maintain the water in Stony lake at a higher level than in previous years it was found necessary to raise a number of the public and private wharfs. The public wharfs at McCracken's, Burleigh Falls and Mount Julian were raised considerably, as were also a number of private wharfs at the various islands on the lake.

BURLEIGH FALLS.

Very extensive repairs were made to the lock at this point. New lock gates were placed in position, equipped with modern opening apparatus.

BUCKHORN.

A new concrete entrance pier at the upper entrance of the lock was built. The bridge was re-planked and generally overhauled. All the works here were repainted.

CHEMONG LAKE.

The swing bridge was re-planked and the piers at this point were repaired. A boom, 700 feet in length, was placed across the western end of this lake in order to prevent the island bogs from floating out and interfering with navigation. This had previously been a great source of annoyance to steamboat men. It was necessary in building this boom to sink two piers in the centre of the lake, to which the boom could be anchored.

LINDSAY.

A new bridge across the Scugog river on the south end of Lindsay street, was built. The bridge has a concrete pivot pier and concrete abutments.

The Wellington street and North Lindsay street bridges were replanked, repaired generally, and painted.

Two new floating lighthouses were placed on the Lindsay river. The channel was cleared of sunken logs.

KIRKFIELD.

A considerable amount of work was carried on here during the winter. A great deal of drowned land had been created by the construction of the Balsam lake—Lake Simcoe division. There were a number of acres of dead trees and stumps which were unsightly and unsanitary. A large area has been cleared up and the work will be continued during the coming winter. In doing this work we took out about 5,000 good cedar posts, which we are utilizing along the canal for fencing purposes. On the right of way along the canal between Kirkfield and Gamebridge a considerable amount of work was done in cleaning up. In doing this work we obtained some splendid pine, hemlock and elm, which we had sawed into plank for our bridges, and joists and rafters for the lockmaster's houses which we are building on this division. There is, in all, about 60,000 feet.

BURNT RIVER.

The Burnt river forms one of the sections of the reservoir waters, on which there are numerous dams that are used to conserve the water until periods of the year when it is required for navigation purposes. During the year a great many repairs were made to the dams on this river.

Pine Lake Dam.—Platform repaired and four new stop logs provided.

Big Bear Lake Dam.—Some minor repairs were made here.

Little Bear Lake Dam.—The dam was strengthened by some stone being placed on it.

White Lake Dam.—A new platform has been put on this dam, also a new windlass, new stop logs provided, and the slide generally repaired.

Swamp Lake.—A new platform was placed on the dam, a new windlass provided; also six new stop logs and general repairs.

Devil's Lake Slides.—The dam was boarded up the whole length with 2-inch lumber, and gravel was put in the entire length of the dam. A windlass was provided and the slide was repaired.

High Falls Dam and Slide.—This dam was extended 20 feet in length and eight new stop logs were provided. The slide was replanked.

Dragg Lake Dam.—This dam was repaired and six new stop logs were provided.

Cocklong Lake.—This dam was also repaired by making five new stop logs and by building a foot bridge over the river.

GULL RIVER.

This river forms another section of the reservoir waters. The following repairs were made to the dams on the Gull river section.

Little and Big Bob Lake.—Six new stop logs were provided, also some minor repairs.

Workmans.—Minor repairs were done here.

Horseshoe.—The platform on the dam, which is 75 feet in length was repaired by having some new stringers provided and also new planks. A new windlass was also provided.

Hawk Lake Dam.—An entire new dam, 100 feet in length, 12 feet high and 20 feet wide was also built here.

Oblong and Eagle Lake.—New boat-houses for the accommodation of the foremen on these waters were built at these two lakes.

MISSISSAGUA RIVER.

This forms still another section of the reservoir waters. The repairs done were as follows :—

Gull Lake.—New stop-logs were provided, also some new flooring in the slide.

Scott's dam.—The slide, 350 feet in length, was rebuilt. Some minor repairs were put in on the dam.

Bottle dam.—A new slide, 65 feet in length was built here.

Eagle Lake.—Two new windlasses were provided and minor repairs performed.

Deer Lake slide.—Some new planking was put in the slide and new sheeting on the face of the dam. The dam was regravelled on the face.

Squaw River.—Two dams, south of the Bobcaygeon, were repaired, and new windlasses and chains were provided.

Noggie's Creek.—The depot dam and the dam at Bass lake were repaired and put into first-class condition.

GENERAL.

The steamer *Empire* was working continuously all season with the dredge *Emmerson*. The *Sovereign* was engaged in general towing and buoying out navigation channels in Rice lake, Stony lake, Buckhorn lake, Sturgeon lake, Cameron lake and Balsam lake.

The plant has been kept in good order. When the steamer *Empire* was drawn out in the fall and examined, it was found that her hull and machinery were beyond repair. We therefore built a new tug, 52 feet in length and 12½ feet beam. She will be used exclusively for towing purposes.

The water in the entire Trent system was maintained at a steady and uniform height throughout the season, there being no complaints in this regard from either steamboat interests or the users of water for power development purposes. The acquiring of the reservoir waters to the north of the main line of the canal has been of great assistance in bringing about this satisfactory state of affairs.

Just prior to the closing of navigation last fall, Mr. Charles T. Fuller, lockmaster at Burleigh Falls, who had been on the canal staff for a great number of years, fell from the lock and was drowned.

During the year the dredge *Trent* was loaned to the Department of Public Works, and has been engaged in dredging the Otonabee river, in the town of Peterborough.

The traffic during the year 1906-7 was the heaviest in the history of the Trent canal.

I have the honour to be, sir,

Your obedient servant,

J. H. McCLELLAN,

Superintendent.

M. J. Butler, Esq., C.E.,
Deputy Minister and Chief Engineer,
Department Railways and Canals,
Ottawa, Ont.

TRENT CANAL SURVEYS.

Office of the Engineer in Charge,
Ottawa, Canada, June 4, 1907.

Sir,—I have the honour to submit my report upon the works under my charge for the nine months ended March 31, 1907, as follows :—

Completed detailed sectional working plans and drawings (42 in all)—comprising locks, dams, bridges, culverts, dock walls, water-tight embankment, water supply storage works with controlling dams, &c., together with report, estimate and specification for section No. 2, of the proposed improvements of the east branch of the Holland river from Holland landing to Newmarket, Ontario, and submitted all but the latter on October 1, and the specification on November 5, 1906.

Completed and submitted on December 20, 1906; general plans, profiles, estimates and report for, both, 6 feet and 9 feet depth of navigation for proposed Lake Ontario outlets for the Trent canal from Rice lake to Port Hope, Cobourg and Trenton, respectively.

This report which was based on exhaustive surveys and investigations embraced every feature relating to those particular routes, including the question of water for lockages; initial cost of construction, cost of maintenance and operation, open lake versus inland navigation, insurance, water powers, harbour facilities, &c.

On February 28, 1907, completed general plans, profiles, estimates and report for, both, 6 feet and 9 feet depth of navigation for proposed Georgian Bay outlets for the Trent canal, from Lake Couchiching via Coldwater, and the Severn river, respectively, and submitted same on March 9, 1907.

This report dealt fully with all points bearing on the merits, &c., of the respective routes, and took into consideration the relative cost of construction; cost of maintenance and operation; water for lockages; water powers, &c.

Upon the completion of the reports effecting the main outlet sections of the Trent canal, work was commenced on the preparation of plans, profiles and estimates for the proposed improvements of the East branch of the Holland river from Newmarket to Aurora, and also of the West branch of the Holland river, from its junction with the East branch, to Schomberg, and good progress had been made on both sections.

On March 18, 1907, I received an official letter instructing me to proceed, at once, with the survey of a route for the Trent canal from Kempenfeldt bay, Lake Simcoe, to the Georgian bay, via the Nottawasaga river, 'so that the quantities may be made up in an accurate and complete manner, and on the same scale and in the same degree of fullness as the other surveys in competition with this route,' &c.

A survey party was quickly organized and commenced the field work for the surveys on March 21. Mr. G. L. Law, a capable, experienced civil engineer, who had been assistant engineer in charge of the surveys of the Port Hope route, and the Rice Lake traverse and contour survey, was placed in direct charge of this party, and very satisfactory progress had been made.

I have the honour to be, sir,

Your obedient servant,

E. J. WALSH, M.C.S.C.E.,

Engineer in Charge.

M. J. BUTLER, ESQ.,
Deputy Minister and Chief Engineer,
Department of Railways and Canals,
Ottawa, Canada.

Office of the General Consulting Engineer to the Government,
and Chief Engineer of the Western Division of the
National Transcontinental Railway.
Room No. 150 West Departmental Building.
OTTAWA, Canada, May 15, 1907.

SIR,—I have the honour to present my annual report for the fiscal year ended March 31, 1907, of the progress made up to that date with the surveys and works of construction on the Western Division of the National Transcontinental Railway by the Grand Trunk Pacific Railway Company.

SURVEYS.

The surveys of the line from a point about 32 miles west of Winnipeg to Edmonton are completed, the plans and profiles of location have been approved by the government, and the works of construction thereon are in progress.

From Edmonton to a point 27 miles west of the 'Yellowhead Pass,' the plans and profiles of location have been approved by the government, but inasmuch as the physical features of the country are such that, from time to time, improvements suggest themselves, both as regards alignment, reduction in the quantity of work, and shortening of distance, plans and profiles of a revised location of sections of the line west of Edmonton may be looked for. The balance of the line from the point about 27 miles west of the Yellowhead Pass to Prince Rupert on the Pacific Coast, a distance of about 676 miles, has been located, and plans and profiles of portions of this section have been filed with the Department of Railways and Canals, but action thereon is being deferred until the country has been more thoroughly examined in fuller detail with a view to possible revision. The company inform me that plans and profiles of other parts of this section are ready for filing with the department, but as the location is being revised and improved, they are holding them until they have the revision completed.

I may say that a very favourable location is being had to the Pacific Coast, only one grade exceeding four-tenths of one per cent occurring, and that is a 1 per cent grade for a distance of about 20 miles. Generally speaking the work will not be heavy for mountain work, but from Prince Rupert for a distance of about 170 miles it is composed almost entirely of very heavy rock excavation. This, however, there appears to be no way of avoiding.

CONSTRUCTION, GRADING AND BRIDGING.

1. No work has been executed between Winnipeg and Portage la Prairie, neither has any work been placed under contract.

2. From Portage la Prairie for a distance of 275 miles westward, the work of grading and bridging, except the bridge over the Assiniboine river, is under contract with Messrs. McDonald McMillan and Company, who have about 75 per cent of the grading done, and of culverts, bridges, &c., about 60 per cent; it may be said that they have made fair progress with the work, considering the difficulty of procuring the requisite number of labourers in Canada last summer. The Grand Trunk Pacific Railway Company, in order to expedite the prosecution of the work, found it necessary to relieve them of some difficult portions, viz.: at Miniota, where the company are themselves executing some heavy clay cutting. The heavy stiff work up the Qu'Appelle Valley, they placed under Contractors Messrs. Treat and Johnson, who pushed it vigorously until the severe weather last winter set in when they had practically to close down until the spring after having executed work to the value of $134,600.

3. The Canadian White Contracting Company are the contractors for the grading and bridging of the line from the west end of the McDonald-McMillan contract, a point 275 miles from Portage la Prairie to a point a short distance west of the crossing of the South Saskatchewan river, a distance of 141 miles, excepting for the bridge over the South Saskatchewan river. This contracting firm have greatly disappointed me; their work has dragged along slowly and unsatisfactorily, but the Grand Trunk Pacific Railway Company assure me they are taking steps to have it prosecuted with greater vigour than in the past. Up to March 31 last only 48 per cent of the grading was done, and about 38 per cent of the entire work under contract.

4. Messrs. Foley Bros., Larson & Company are the contractors for the grading and bridging from the west end of the Canadian White contract to Edmonton, a distance of about 316 miles, excepting the bridges over the Battle river and the North Saskatchewan river. These contractors have, so far, disappointed me. Of the 10,000,000 cubic yards of grading contracted for, they have executed 2,500,000 cubic yards, about 25 per cent only, and a very small proportion of the culvert and bridge work. They are, however, contractors of repute who cannot afford to lose their reputation, and they have promised to prosecute the work with great vigour to completion during the coming season.

5. The substructure of the Assiniboine bridge, I understand, the Grand Trunk Pacific Railway Company propose executing by day labour. The superstructure is under contract with the Canadian Bridge Company.

6. The substructure of the South Saskatchewan river bridge is under contract with the Messrs. John Gunn & Sons, who have made slow progress with the work, there being up to March 31, 1907, only 2,850 cubic yards excavated in foundation and 720 cubic yards concrete laid. The steel superstructure is under contract with the Canadian Bridge Company, who have the work sufficiently advanced to encourage the hope that in the course of the coming working season it will be erected.

7. Battle River Bridge.—No contract has yet been made for the substructure, but the Canadian Bridge Company are the contractors for the steel superstructure.

8. The substructure of the North Saskatchewan river bridge is under contract with Mr. Charles May, who has only recently commenced the work. The steel superstructure is under contract with the Canadian Bridge Company, who, I understand, have the material in stock, and are likely to have the bridge erected before the winter sets in.

It is only fair to those engaged in carrying out the works of construction of the line between Portage la Prairie and Edmonton, that I should explain the winter in the North-west has been unusually severe and boisterous, with heavy falls of snow, making it almost impossible to carry on works of construction; to this, no doubt, may be attributed the practical cessation of work during the last four or five months. I had anticipated working in the heavy cuttings during these months, as well as the delivery of large quantities of timber for the structures, but neither one nor the other has been possible. However, the contractors promise to put the necessary life into the work during the coming season, so as not to delay the track-laying.

TRACK-LAYING AND TELEGRAPH LINE.

The track laying which is being carried on by day labour by the Grand Trunk Pacific Railway Company, is making very unsatisfactory progress owing to the difficulty in procuring ties, only 36 miles of track having been laid up to March 31 last, whereas it had been fully expected that 120 miles of track would have been laid by that date. The outlook in the matter of the supply is most unfavourable for the coming season. Eighty-pound steel rails and fastenings are delivered for the whole distance from Winnipeg to Edmonton—800 miles—but the shortage of ties is delaying the track-laying.

The wire and cedar poles for the telegraph line are delivered and about 36 miles of telegraph line is erected. I think there will be no difficulty in keeping the erection of the telegraph line abreast of the tracklaying.

BUILDING.

No station buildings, engine houses, water tanks or coal sheds have, up to March 31 last, been erected, but some small buildings at Portage la Prairie storage yard have been built in which work on buildings and water service is being prepared.

In conclusion, I may remark that the Grand Trunk Pacific Railway Company assure me they have made such arrangements as to ensure the grading and bridging between Winnipeg and Edmonton being completed by the close of the fiscal year ending March 31, 1908, and the track being laid between Winnipeg and Saskatoon and that the only obstacle to prevent reaching Edmonton with the track within that time, will be the difficulty in obtaining the requisite quantity of ties.

I have the honour to be, sir,

Your obedient servant,

COLLINGWOOD SCHREIBER,

General Consulting Engineer to the Government and Chief Engineer, Western Div. National Transl. Ry.

PART III

RAILWAY SUBSIDIES

No. 1.

RAILWAY SUBSIDIES.

TABLE of per mile Cash Subsidies paid in aid of Railway Construction, showing amount of Subsidy granted for same Railways.

Number.	Name of Railway.	No. of miles built up to March 31, 1907.	No. of miles paid and provided for.	Subsidy paid and available at March 31, 1907.	Subsidy paid to March 31, 1907.	Subsidy paid to June 30, 1907.
				$ cts.	$ cts.	$ cts.
1	Albert Southern	16	16	50,460 00	50,460 00	50,460 00
2	†Atlantic and Lake Superior	30	30	165,734 00	144,969 02	144,969 02
3	†Algoma Central and Hudson Bay	77	91	924,976 00	924,976 00	924,976 00
4	Baie des Chaleurs	70	70	620,000 00	620,000 00	620,000 00
5	Baie of Quinte	15	35	141,722 45	141,722 45	141,722 45
6	Beauharnois Junction	19·50	19·50	62,400 00	62,400 00	62,400 00
7	Belleville and North Hastings	6·84	6·84	21,888 00	21,888 00	21,888 00
8	Beersville Coal and Railway Co	6·48	7	20,736 00	20,736 00	20,736 00
9	Brantford, Waterloo and Lake Erie	18	18	57,600 00	57,600 00	57,600 00
10	Brockville, Westport and Sault Ste. Marie	44·50	44·50	140,800 00	140,800 00	140,800 00
11	Bruce Mines and Algoma	18	18	53,920 00	53,920 00	53,920 00
12	Bouctouche and Moncton	31·75	31·75	101,600 00	101,600 00	101,600 00
13	Canada Atlantic	54·05	54·05	282,355 20	282,355 20	282,355 20
14	Canada Central	120	120	1,525,250 00	1,525,250 00	1,525,250 00
15	†Canada Eastern	107	107	350,400 00	350,400 00	350,400 00
16	†Canadian Pacific	1,905	1,905	25,000,000 00	25,000,000 00	25,000,000 00
17	" (extensien)*	679	698·83	5,912,922 00	5,912,922 00	5,912,922 00
18	†Cape Breton, extension	30	30	182,400 00	182,400 00	182,400 00
19	Caraquet	67	67	224,000 00	224,000 00	224,000 00
20	Central (of New Brunswick)	45·66	89·50	238,400 00	142,400 00	142,400 00
21	Cornwallis Valley	14	14	44,800 00	44,800 00	44,800 00
22	Columbia and Kootenay	27 75	27·75	88,800 00	88,800 00	88,800 00
23	†Canadian Northern	490	490	1,909,132 00	1,909,132 00	1,909,132 00
24	Chateaugnay and Northern	58	58	391,819 75	391,919 75	391,819 75
25	Cap de la Madeleine	2·32	2·32	7,424 00	7,424 00	7,424 00
26	†Coast of Nova Scotia (now Halifax and Yarmouth)	50	61	160,000 00	160,000 00	160,000 00
27	†Central Ontario	21	40	67,200 00	67,200 00	67,200 00
28	Cumberland	14	14	39,850 00	39,850 00	39,850 00
29	Dominion Lime Co	4·80	4·80	15,360 00	15,360 00	15,360 00
30	Dominion Coal Co	27·44	27·44	87,808 00	87,808 00	87,808 00
31	†Drummond County	133·00	135·60	423,936 00	423,936 00	423,936 00
32	†East Richelieu Valley	21·86	21·86	69,952 00	69,952 00	69,952 00
33	Elgin, Petitcodiac and Havelock	12	12	38,400 00	38,400 00	38,400 00
34	Erie and Huron	30	30	96,000 00	96,000 00	96,000 00
35	Esquimalt and Nanaimo	71	71	750,000 00	750,000 00	750,000 00
36	Fredericton and St. Mary's Bridge Co	1·33	1·33	30,000 00	30 000 00	30,000 00
37	Grand Trunk, Georgian Bay and Lake Erie	12·42	12·42	39,744 00	39,744 00	39,744 00
38	Grand Trunk	Bridge.	Bridge.	500,000 00	500,000 00	500,000 00
39	Great Eastern	12·50	12·50	40,345 00	40,345 00	40,345 00
40	†Great Northern	140·42	143·59	557,788 31	557,788 31	557,788 31
41	Guelph Junction	15·25	15·25	46,000 00	46,000 00	46,000 00
42	†Gulf Shore	16·78	16·78	53,699 20	53,699 20	53,699 20
	Carried forward	4,536·65	4,670·61	41,535,621 91	41,418,856 93	41,418,856 93

TABLE of per mile Cash Subsidies granted and paid in aid of Railway Construction, &c.—*Continued.*

Number.	Name of Railway.	No. of miles built up to March 31, 1907.	No. of miles paid and pro-vided for.	Subsidy paid and available at March 31, 1907.	Subsidy paid to March 31, 1907.	Subsidy paid to June 30, 1907.
				$ cts.	$ cts.	$ cts.
	Brought forward	4,536·65	4,670·61	41,535,621 91	41,418,856 93	41,418,856 93
43	Halifax and South Western	98	231	921,883 20	921,883 20	921,883 20
44	Harvey Branch	3	3	5,553 57	5,553 57	5,553 57
45	Hereford	48·50	48·50	155,200 00	155,200 00	155,200 00
46	Irondale, Bancroft and Ottawa	45	45	144,000 00	144,000 00	144,000 00
47	International (Quebec)	49	49	156,800 00	156,800 00	156,800 00
48	International (N. B.), formerly Restigouche and Western	15	77	246,400 00	178,408 07	178,408 07
49	†Inverness Ry. & Coal Co	60·97	98	390,268 00	368,545 97	368,545 97
50	James Bay		270	1,356,800 00	1,071,872 00	1,071,872 00
51	Joggins	12	12	37,500 00	37,500 00	37,500 00
52	Kingston and Pembroke	15	15	48,000 00	48,000 00	48,000 00
53	Klondyke Mines Railway Co.	30	30	256,000 00	96,000 60	197,184 00
54	Kingston, Napanee and Western	61·35	61·35	208,732 80	208,732 80	208,732 80
55	L'Assomption	3·50	3·50	11,200 00	11,200 00	11,200 00
56	†Lake Erie and Detroit River	126·90	128·05	475,851 00	475,851 00	475,851 00
57	Lake Temiscamingue Colonization	45·84	45·84	310,335 95	310,335 95	310,335 95
58	Leamington and Lake St. Clair	16	16	51,200 00	51,200 00	51,200 00
59	Lindsay, Bobcaygeon and Pontypool	38·79	38·70	185,173 06	185,173 06	185,173 06
60	Lotbiniere and Megantic	30	30	96,000 00	96,000 00	96,000 00
61	Manitoulin and North Shore	12·60	12·60	204,800 00	32,000 00	32,000 00
62	Middleton and Victoria Beach	39·30	39·30	125,760 00	125,760 00	125,760 80
63	Montreal & Sorel (now South Shore)	61·50	126·67	517,541 92	296,998 38	296,998 38
64	Montreal and Lake Champlain	83	83	103,600 00	103,600 00	103,600 00
65	Montreal and Western	70	70	361,270 00	361,270 00	361,270 00
66	Montreal and Lake Maskinongé	12·90	12.90	41,280 00	41,280 00	41,280 00
67	Montreal and Ottawa	60	60	192,000 00	192,000 00	192,000 00
68	†Montreal and Province Line	18·3	18·3	58,560 00	58,560 00	58,560 00
69	Montfort Colonization	32·20	32·20	167,440 00	167,440 00	167,440 00
70	Maganetawan River	1·11	1·11	3,552 00	3,552 00	3,552 00
71	†Massawippi Valley	1·68	1·68	5,376 00	5,376 00	5,376 00
72	†Midland (Nova Scotia)	57·18	58	367,168 00	367,168 00	367,168 00
73	Nakusp and Slocan	36·80	36·80	117,760 00	117,760 00	117,760 00
74	New Brunswick and P. E. Island	35·45	35·45	113,440 00	113,440 00	113,440 00
75	New Brunswick Coal and Railway	15	45	144,000 00	48,000 00	48,000 00
76	New Glasgow Iron and Coal Co	12·45	12·45	39,840 00	39,840 00	39,840 00
77	Nicola, Kamloops and Similkameen		45	292,800 00	110,592 00	110,592 00
78	Northern Colonization	20·90	20·90	133,760 00	133,760 00	133,760 00
79	Northern Pacific Junction	110	110	1,320,000 00	1,320,000 00	1,320,000 00
80	Nova Scotia Central	73·50	73·50	235,200 00	235,200 00	235,200 00
81	Ontario, Belmont and Northern	9·60	9·60	30,720 00	30,720 00	30,720 00
82	Ontario and Quebec	61·25	61·25	196,000 00	196,000 00	196,000 00
83	Orford Mountain	26·50	53·50	168,814 50	168,814 50	168,814 50
84	Oshawa Railway and Navigation Co.	7	7	22,400 00	22,400 00	22,400 00
85	†Ottawa, Northern and Western (formerly Ottawa & Gatineau Valley)	82·28	86	410,688 00	410,688 00	410,688 00
86	†Ottawa and New York	53·87	53·87	262,384 00	262,384 00	262,384 00
87	†Ottawa, Arnprior and Parry Sound	159·58	159·58	779,712 00	779,712 00	779,712 00
88	Parry Sound Colonization	47·75	47·75	152,800 00	152,800 00	152,800 00
89	Pontiac and Pacific Junction	70	70	193,578 00	193,578 00	193,578 00
90	†Phillipsburg Junction	7·41	7·41	23,712 00	23,712 00	23,712 00
91	Pontiac and Renfrew	4·25	4·25	13,600 00	13,600 00	13,600 00
92	Pontiac and Pacific and Ottawa and Gatineau	Bridge.	Bridge.	212,500 00	212,500 00	212,500 00
93	†Pembroke Southern	20	20	64,000 00	64,000 00	64,000 00
94	Port Arthur, Duluth and Western	84·75	84·75	271,200 00	271,200 00	271,200 00
95	Quebec Central	74·86	74·86	348,342 00	348,342 00	348,342 00
96	Quebec Bridge Co	Bridge.	Bridge.	374,353 33	374,353 33	374,353 33
97	Quebec and Lake St. John	245·85	245·85	1,230,743 50	1,160,471 50	1,160,471 50
98	Quebec, Montmorency & Charlevoix	30	30	96,000 00	96,000 00	96,600 00
99	Shuswap and Okanagan	51	51	163,200 00	163,200 00	163,200 00
100	South Norfolk	17	17	54,400 00	54,400 00	54,400 00
101	St. Catharines and Niagara Central	12	12	38,400 00	38,400 00	38,400 00
	Carried forward	7,054·23	7,863·08	56,241,154 74	54,851,989 26	54,953,168 26

TABLE of per mile Cash Subsidies granted and paid in aid of Railway Construction, &c.—*Concluded.*

Number.	Name of Railway.	No. of miles built up to Mar. 31, 1907.	No. of miles paid and provided for.	Subsidy paid and available at Mar. 31, 1907.	Subsidy paid to Mar. 31, 1907.	Subsidy paid to June 30, 1907.
				$ cts.	$ cts.	$ cts.
	Brought forward	7,054·23	7,863·08	56,241,154 74	54,851,984 26	54,953,168 26
102	St. Clair Frontier Tunnel	2·23	2·23	375,000 00	375,000 00	375,000 00
103	St. Lawrence and Lower Laurentian	38·85	38·85	217,600 00	217,600 00	217,600 00
104	St. Louis, Richibucto and Buctouche	7	7	22,400 00	22,400 00	22,400 00
105	†St. Lawrence and Adirondack	33·51	33·51	149,481 60	149,481 60	149,481 60
106	†St. Mary River	44	46	177,400 00	148,094 00	148,094 00
107	St. Stephen and Milltown	4·64	4·64	14,848 00	14,848 00	14,848 00
108	Schomberg and Aurora	14·42	14·42	46,144 00	46,144 00	46,144 00
109	Temiscouata	112·95	112·95	645,950 00	645,950 00	645,950 00
110	†Thousand Islands	5·19	5·19	29,840 00	29,840 00	29,840 00
111	†Tilsonburg, Lake Erie and Pacific	33·96	47·50	117,431 48	117,431 48	117,431 48
112	Tobique Valley	27·88	27·88	134,016 00	134,016 00	134,016 00
113	Toronto, Grey and Bruce	4·58	4·58	14,656 00	14,656 00	14,656 00
114	†United Counties	59	59	188,816 00	188,816 00	188,816 00
115	Waterloo Junction	10·25	10·25	32,800 00	32,800 00	32,800 00
116	Western Counties	20	20	500,000 00	500,000 00	500,000 00
117	Western Ontario Pacific	18·75	18·75	60,000 00	60,000 00	60,000 00
118	York and Carleton	5·73	5·73	18,336 00	18,336 00	18,336 00
	Total	7,497·17	15,818·73	58,985,873 82	‡57,567,397 34	57,668,581·34

‡Add subsidy of used rails as per statement, part iii., page 7, $152,305.20, and Atlantic and Northwestern, $3,172,200, less subsidy Canadian Pacific Railway, main line, $25,000,000, and Western Counties Railway, $560,000, which will then agree with statement of subsidies in part ii, page 50, viz., $34,255,135.06.

*Includes the mileage of the North Shore Railway, 160 miles.

†By 60-61 Vic., cap. 4, 62-63 Vic., cap. 7, 63-64 Vic., cap. 8, 1 Edward VII., cap. 7, 3 Edward VII., cap. 57, and 4 Edward VII., cap. 34, subsidy was authorized on certain mileage of this railway, specified in the Act of Parliament, of $3,200 per mile and a further subsidy beyond the sum of $3,200 per mile, of 50 per cent on so much of the *average cost* of the said specified mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile.

The amount of certain of the subsidies authorized by Parliament given in this statement, includes the determined portion of the subsidies under 60-61 Vic., cap. 4, 62-63 Vic., cap. 7, 63-64 Vic., cap. 8, and 1 Edward VII., cap. 7, 3 Edward VII., cap. 57, and 4 Edward VII., cap. 34, viz.: The amount produced by the $3,200 per mile, but the other portion is now an undetermined amount, and therefore cannot be shown here.

STATEMENT showing Railways receiving Cash Subsidies of fixed amounts, payable Annually or Semi-annually for fixed periods of years.

Number.	Name of Railway.	Miles subsidized.	Amount of Instalment.	Amount paid up to March 31, 1907.
				$ cts.
1	International (Atlantic and Northwest Railway Co.)	252	$93,300 per ½ year for 30 years	3,358,800
2	Kingston, Smith's Falls and Ottawa Railway Co	56	$ 3,136 " 21 "	Nil.
	Total	308		3,358,800

STATEMENT showing Railways aided by the Grant of Loans

No.	Name of Railway.	Amount of Loans authorized.	Amount loaned.
		$	$ cts.
1	Albert Railway Co	15,000	14,725 56
2	Fredericton and St. Mary's Bridge Co	300,000	300,000 00
3	St. John Bridge and Railway Extension Co	500,000	433,900 00
	Total	815,000	748,625 56

STATEMENT showing Railways subsidized by the Grant of used Iron Rails valued at the amount set forth.

No.	Name of Railway.	Tons of used Rails.	Subsidy on value of Rails.	Subsidy on used Rails paid.
			$ cts.	$ cts.
1	Central Railway Company of New Brunswick	4,052	83,612 54	83,612 54
2	Elgin, Petitcodiac and Havelock	2,201	44,252 82	44,252 82
3	Chatham Branch Railway Co	958	24,439 84	24,439 84
	Total	7,211	152,305 20	152,305 20

STATEMENT showing Railways aided by the Loan of used Iron Rails valued at the amount set forth.

No.	Name of Railway.	Tons of used Rails.	Value of used Rails loaned.	Remarks.
			$ cts.	
1	Kent Northern Railway Co	2,549	58,334 27	By 51 Victoria, chapter 3, these used rails will be granted as a subsidy, (the section of road to be first laid with new steel rails weighing not less than 50 lbs. per lin. yard and after an O.C. had been passed authorizing transfer.)
2	Halifax Cotton Co	233	4,335 00	
3	Steel Company of Canada	597	11,964 66	
4	Albert Railway Co	726	14,665 45	
	Total	4,105	89,299 38	

No. 2

LIST OF RAILWAY SUBSIDY ACTS PASSED IN EACH YEAR.

NOTE.—The marginal number opposite each subsidy has reference to the alphabetical list in the Deputy Minister's report showing the action taken in cases where a contract for work has been made with any company.

By the Acts of Parliament below specified, authority has been placed in the hands of the Governor in Council to grant, upon certain conditions, aid towards the construction of various lines of railway throughout the Dominion, as follows, namely :—

By the Acts of 45 Vic., cap. 14, 1882 *(Assented to 17th May, 1882)* :—

1. For a railway from Gravenhurst to Callander, both in the province of Ontario, a subsidy not exceeding $6,000 per mile, nor exceeding in the whole $660,000

2. For a railway from St. Raymond to Lake St. John, both in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 384,000

3. For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the province of Quebec, or between them, to Edmundston, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 240,000

4. For a railway from Oxford to New Glasgow, both in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 224,000

"The said subsidies to be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to complete the said railways respectively, within a reasonable time, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in an agreement to be made by the company with the Government, and which the Government is empowered to make, and to be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, such proportion to be established by the report of the said Minister; provided always, that the granting of such bonuses or subsidies shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting therewith, as the Governor in Council may determine."

By the special Act 45 Vic., cap. 55, 1882 *(Assented to 17th May, 1882)* :—

5. A subsidy authorized in favour of "The Chignecto Marine Transport Railway Company," provided that they construct and thereafter maintain and operate a ship railway, to be approved by the Government, across the Isthmus of Chignecto, from the Gulf of St. Lawrence to the Bay of Fundy, per year, for twenty-five years..... $150,000

By the Act 46 Vic., cap. 25, 1883 *(Assented to 25th May, 1883)* :—

6. To the Baie des Chaleurs Railway Company, for 100 miles of their railway, from Métapediac, on the Intercolonial Railway, to Paspebiac, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 320,000

7. To the Caraquet Railway Company, for 36 miles of their railway, from a point near Bathurst to Caraquet, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $115,200

8. To the Gatineau Valley Railway Company, for the first 50-mile section of their railway, from Hull station, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 160,000

9. To the Great American and European Short Line Railway Company, for 80 miles of their railway, from Canso to Louisburg or Sydney, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 256,000

10. To the International Railway Company, for 49 miles of their railway, from Sherbrooke, in the province of Quebec, to the international boundary line, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 156,800

11. To the Northern and Western Railway Company, for 32 miles of their railway, from the Intercolonial Railway, near the Miramichi, to Moran's, near Demphy village, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 102,400

12. To the Montreal and Western Railway Company, for the first 50-mile section of their railway, out of St. Jérôme, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 160,000

13. To the Napanee, Tamworth and Quebec Railway Company, for 28 miles of their railway, from Napanee to Tamworth, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 89,600

14. To the Quebec and Lake St. John Railway Company, for 25 miles of their railway, from St. Raymond to Lake St. John, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 80,000

In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.

15. For a railway from the International Railway at Petitcodiac to Havelock Corner, in the province of New Brunswick, 12 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

16. For a railway from Gravenhurst to Callander, 110 miles, a subsidy not exceeding $6,000 per mile, nor exceeding in the whole 660,000

In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.

"The nine subsidies first mentioned to be granted to the companies hereinbefore named respectively; and the two subsidies last mentioned to be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to complete the said railways, respectively; and all the eleven lines above mentioned, and also the lines of railway in respect of which it is provided by the Act of forty-fifth Victoria, chapter fourteen, that subsidies may be granted, shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years from and after the passing of this Act, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made by each company with the Government, and which the Government is empowered to make; and all the said subsidies authorized by this Act, respectively, to be paid out of the Consolidated Revenue Fund of Canada by instalments, on the completion of each section of not less than ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, to be established by the report of the said Minister; Provided always, that the granting of such subsidies shall be subject to such conditions for securing such running powers

or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized as the Governor in Council may determine."

By the special Act 46 Vic., cap. 26, 1883 *(Assented to 25th May, 1883)*:—

17. An advance authorized in favour of the "St. John Bridge and Railway Extension Company," to enable them to build a railway bridge across the River St. John, N.B., with railway connection with the Intercolonial, such advance to be secured by a mortgage on their entire property, not to exceed 80 per cent of the expenditure on the work, nor a total sum of..... $ 500,000

By the Act 47 Vic., cap. 8, 1884 *(Assented to 19th April, 1884)*:—

18. To the Government of the province of Quebec, in consideration of their having constructed the railway from Quebec to Ottawa, forming a connecting line between the Atlantic and Pacific coasts via the Intercolonial and Canadian Pacific Railways, and being as such a work of national and not merely provincial utility, a subsidy not exceeding $6,000 per mile for the portion between Quebec and Montreal, 159 miles, nor exceeding in the whole..... 954,000

19. And for the portion between Montreal and Ottawa, 120 miles, $12,000 per mile, nor exceeding in the whole..... 1,440,000

20. For the construction of a line of railway connecting Montreal with the harbours of St. John and Halifax by the shortest and best practicable route, after the report of competent engineers, a subsidy not exceeding $170,000 per annum, for fifteen years, or a guarantee of a like sum for a like period as interest on bonds of the company undertaking the work.

21. For the construction of a line of railway from Oxford station, on the Intercolonial Railway, to Sydney or Louisburg, a subsidy not exceeding $30,000 per annum for fifteen years or a guarantee of a like sum for a like period as interest on the bonds of the company undertaking the work, in addition to the subsidies previously granted, and also a lease or transfer to such company of the Eastern Extension Railway, from New Glasgow to Canso, with its present equipment.

22. To the Quebec Central Railway Company, for a line of railway from Beauce Junction to the international boundary line, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 211,200

23. For the extension of the Canadian Pacific Railway, from its terminus at St. Martin's Junction, near Montreal, or some other point on the Canadian Pacific Railway, to the harbour of Quebec, in such manner as may be approved by the Governor in Council, a subsidy not exceeding $6,000 per mile, nor exceeding in the whole..... 960,000

24. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria branch of the Midland Railway to the village of Bancroft, in the township of Dungannon, county of Hastings, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 160,000

25. To the Pontiac Pacific Junction Railway, for a line of railway from Hull or Aylmer to Pembroke, provided the Ottawa River is crossed at some point not east of Lapasse, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 272,000

26. To the Gatineau Railway Company, for a line of railway from Kazuabazua to Le Désert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 160,000

27. To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth to Bogart and Bridgewater, a subsidy, not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

28. To the Montreal and Western Railway Company, for a line of railway from the end of the line subsidized in the now last session of Parliament, towards Le Désert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $160,000

29. To the Northern and Western Railway Company, for a line of railway from Fredericton to the Miramichi River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole (instead of the subsidy proposed in 1883) 128,000

30. To the Erie and Huron Railway Company, for a line of railway from Wallaceburg to Sarnia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

31. To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Perth, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 262,400

32. To the Kingston and Pembroke Railway Company, for a line of railway from Mississippi to Renfrew, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000

33. To the Great Northern Railway Company, for that portion of their railway between St. Jérôme and New Glasgow, in the county of Terrebonne, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 32,000

34. For a line of railway and bridge between the Jacques Cartier Union Railway Junction with the Canadian Pacific Railway and St. Martin's Junction connecting the Jacques Cartier Union Railway with the North Shore Railway proper, a subsidy not exceeding in the whole 200,000

35. For a line of railway from Richibucto to St. Louis, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 22,400

36. For a line of railway from Hopewell to Alma, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 51,200

37. For a line of railway from St. Andrew's to Lachute, in the county of Argenteuil, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 22,400

38. For a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 217,600

39. For a line of railway from Annapolis to Digby, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000

40. For a line of the Central Railway, from the head of Grand Lake to the Intercolonial Railway between Sussex and St. John, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 128,000

41. To the Caraquet Railway Company, for the extension of their line of railway from Caraquet to Shippegan Harbour, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 76,800

42. For a branch of the Intercolonial Railway, from Metapediac eastward towards Paspebiac, twenty miles, in the province of Quebec, a sum not exceeding in the whole 300,000

43. For a branch of the Intercolonial Railway, from Derby Station to Indiantown, fourteen miles, a sum not exceeding in the whole 140,000

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies are

granted shall be commenced within two years from the first day of July next and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, except the line mentioned in the fourth section of this Act,* which shall be commenced within one year, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister. The subsidies to the province of Quebec shall be capitalized, and the interest shall be payable at such time and in such manner as the Government of Canada shall agree upon with the Government of the said province. The two subsidies last mentioned in the list are for works to be constructed by the Government of Canada.

"Provided, always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By the special Act 47 Vic., cap. 6, 1884 *(Assented to 19th April, 1884)*:

44. Relating to an agreement with the province of British Columbia, authority was given, *inter alia*, for the grant of a subsidy to the "Esquimalt and Nanaimo Railway Company" in aid of the construction of a line of railway and telegraph between the points named; such subsidy to be in lands *en bloc* on Vancouver Island, the boundaries being fixed by the Act, and in money $750,000

By the Act 48-49 Vic., cap. 59, 1885 *(Assented to 20th July, 1885)*:

45. To the Ottawa, Waddington and New York Railway and Bridge Company, for a line of railway from Ottawa to Waddington, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 166,400

46. To the New Brunswick and Prince Edward Island Railway Company, for a line of railway from Sackville to the Straits of Northumberland, at or near Cape Tormentine, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 118,400

47. To the Montreal and Sorel Railway Company, for a line of railway from St. Lambert to Sorel, a subsidy not exceeding $1,600 per mile nor exceeding in the whole 72,000

48. To the Brockville, Westport and Sault Ste. Marie Railway Company, for a line of railway from Brockville to Westport, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 128,000

49. To the Quebec and Lake St. John Railway Company, for a line of railway from its junction on the North Shore Railway to St. Raymond, upon condition of the company extending their road to a point 50 miles north of St. Raymond, a subsidy not exceeding $3,200 per mile nor exceeding in the whole 96,000

50. To the Northern and Western Railway Company, for a line of railway from the northern end of the 40 miles subsidized between Fredericton and the Miramichi River by 47 Victoria, chapter 8, to Boiestown, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 19,200

* The extension of the Canadian Pacific Railway from its terminus at St. Martin's Junction, or some other point on the said railway to the harbour of Quebec.

51. To the Montreal and Champlain Junction Railway Company, for a line of railway from Brosseau's to Dundee, a subsidy not exceeding $500 per mile, nor exceeding in the whole $30,000

52. To the Thunder Bay Colonization Railway Company, for a line of railway from the Murillo station of the Canadian Pacific Railway to the east end of Whitefish Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 92,000

53. To the Central Ontario Railway Company, for a line of railway from Coe Hill or Rathbun, to Bancroft, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000

54. To the Belleville and North Hastings Railway Company, for a line of railway from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, a subsidy not exceeding $1,500 per mile, nor exceeding in the whole 10,500

55. For a line of railway from Long Sault to the foot of Lake Temiscamingue, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 25,600

56. For a line of railway from a point on the Canada Southern Railway near Comber, to Lake Erie, at or near the village of Leamington, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 44,800

57. To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth towards Bogart and Bridgewater, 16 miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy of 70,000

58. To the Gatineau Railway Company, for a line of railway from Hull station towards Le Désert, a distance of 62 miles, in lieu of the subsidies granted by 46 Vic., chap. 25, and 47 Vic., chap. 8, a subsidy of 320,000

59. For a line of railway from the Grand Piles, on the River St. Maurice, to its junction with Lake St. John Railway, a distance of about 50 miles, in lieu of the subsidy granted by 47 Vic., chap. 8, for a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy of 217,600

60. To the Canada Atlantic Railway Company, for a line of railway from Valleyfield to a point one and a half miles west of Johnston's, a subsidy not exceeding $1,600 per mile, and from one and a half miles west of Johnston's to Lacolle; also from the present terminus at Ottawa, to the Chaudiere Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

61. For a line of railway from Indiantown via the Miramichi Valley, to its junction with the Northern and Western Railway at or near Boiestown, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 140,800

" The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways, respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions, specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister.

"Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connected with those so subsidized as the Governor in Council may determine."

By the Act 48-49 Vic., cap. 58, 1885 *(Assented to 20th July, 1885)*:—

62. For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the province of Quebec, to Edmundston, in the province of New Brunswick, a subsidy not exceeding two thousand eight hundred dollars per mile for seventy-five miles, and six thousand dollars per mile for eight miles, nor exceeding in the whole two hundred and fifty-eight thousand dollars; the said subsidy to be in addition to the subsidy authorized to be granted in aid of the construction of the said railway by the Act forty-fifth Victoria, chapter fourteen, and constituting with the subsidy so authorized, a subsidy not exceeding in the whole four hundred and ninety-eight thousand dollars, and to be granted for the said railway upon the terms and conditions specified in the said Act, and payable out of the Consolidated Revenue Fund of Canada; and for the purpose of incorporating the persons undertaking the construction of the said railway and those who shall be associated with them in the undertaking, the Governor may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, which shall be similar to such of the franchises, privileges and powers granted to railway companies during the present session as the Governor shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.

63. For a line of railway from the south bank of the St. Lawrence river, opposite or near Montreal, to the harbours of St. Andrew's, St. John and Halifax, via Sherbrooke, Moosehead Lake, Mattawamkeag, Harvey, Fredericton and Salisbury, a subsidy not exceeding eighty thousand dollars per annum for twenty years, forming in the whole, together with the subsidy authorized by the Act forty-seventh Victoria, chapter eight, for a line of railway connecting Montreal with the said harbours of St. John and Halifax by the shortest and best practicable route, which the line above described is found to be, a subsidy not exceeding two hundred and fifty thousand dollars per annum, the whole of which shall be paid in aid of the construction of such a line of railway for a period of twenty years, or a guarantee bond of a like sum for a like period as interest on the bonds of the company undertaking the work; the said subsidy to be so granted upon the terms and conditions of and payable out of the Consolidated Revenue Fund in the manner specified in the said last mentioned Act in respect of the subsidy thereby authorized in aid of the said line of railway.

64. The Governor in Council may grant a further subsidy as an aid towards procuring free access as hereinafter described for the trains and traffic of the Canadian Pacific Railway Company from St. Martin's Junction, near Montreal, or from some other point on their railway to be selected by the said company, to the harbour of Quebec, in such a manner as shall be approved by the Governor in Council, that is to say: an additional subsidy not exceeding three hundred and forty thousand dollars, constituting, together with the subsidy authorized by the said last mentioned Act, to aid in procuring the extension of

the Canadian Pacific Railway to Quebec, and the subsidy also thereby authorized to aid in constructing a line connecting the Canadian Pacific Railway at the Jacques Cartier Union Junction with the North Shore Railway proper (which subsidies shall be applicable to the said first mentioned purpose) a sum not exceeding in the whole the sum of one million five hundred thousand dollars, payable out of the Consolidated Revenue Fund of Canada.

The said Act further provided as follows in relation to this matter:—

"If it should be expedient so to do in order to facilitate such access, the Governor in Council may acquire the North Shore Railway, and may apply the said sum of one million five hundred thousand dollars, or any part thereof, in aid of such acquisition and upon such acquisition may transfer and convey or lease the said railway to the Canadian Pacific Railway Company, subject to such obligation as the Government shall have assumed in acquiring it."

By the Act 49 Vic., cap. 10, 1886 (*Assented to 2nd June, 1886*):—

65. For a railway from a point at or near Moncton, to Buctouche, in the province of New Brunswick, thirty miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 96,000

66. For a railway from Ingersoll via London to Chatham, in the province of Ontario, eighty miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 256,000

67. To the Northern and Western Railway Company, for ten miles of their railway, intervening between the termini of the portions of their railway for which subsidies are already granted, the one from Fredericton and the other from Indiantown, and an extension of two miles down to deep water at Chatham, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 32,000

68. To the Caraquet Railway Company, for ten miles of their railway, from the end of the present subsidized portion at Lower Caraquet to Shippegan, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 32,000

69. To the Lake Erie, Essex and Detroit River Railway Company, for thirty-seven miles of their railway, from Windsor to Leamington, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 118,400

70. To the Thunder Bay Colonization Railway Company, for fifty-six miles of their railway, from the end of the present subsidized section to a point near Crooked Lake, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 179,200

71. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, on the line of the Northern Pacific Junction Railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 128,000

72. For a railway from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the province of Quebec, eighteen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 57,600

73. For a railway from Hereford to the International Railway, in the township of Eaton, in the province of Quebec, thirty-four miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole .. 108,800

74. For a railway from St. Félix to Lake Maskinongé, parish of St. Gabriel in the province of Quebec, ten miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 32,000

75. For a railway from Glenannan to Wingham, in the province of Ontario, five miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 16,000

76. For a railway from a point at or near the McCann Station, on the Intercolonial Railway, to the Joggins, on Cumberland Basin, in the province of Nova Scotia, twelve miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 38,400

77. For a railway from L'Assomption to L'Epiphanie, in the province of Quebec, three miles and a half, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 11,200

78. To the Montreal and Western Railway Company, for seventy miles of their railway from St. Jérôme, north-westerly towards Désert, in the province of Quebec, a subsidy of $5,161 per mile, in lieu of the subsidies granted by 46 Vic., chap. 25, and 47 Vic., chap. 8, not exceeding in the whole..... 361,270

79. For a railway from St. Andrew's to the Canadian Pacific Railway at or at any point east of the town of Lachute, in the county of Argenteuil, in the province of Quebec, seven miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400

80. To the Canada Atlantic Railway Company, for twelve miles of their railway from Clark's Island to Valleyfield, and from Lacolle, in the province of Quebec, to the international boundary, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

81. For a railway from Truro to Newport, in the province of Nova Scotia, forty-nine miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 156,800

82. To the Quebec and Lake St. John Railway Company, for ninety-five miles of their railway, from a point fifty miles north of St. Raymond to Lake St. John, in the province of Quebec, a subsidy not exceeding $1,961 per mile, nor exceeding in the whole (in addition to the subsidy granted by 45 Victoria, chapter 14, and 46 Victoria, chapter 25, of $3,200 per mile)..... 186,295

83. To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway from Lorette via Cap Rouge to Quebec, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

84. For the construction of wharfs and landing stages on the line of the railway from Long Sault to the foot of Lake Temiscamingue, a subsidy of..... 6,000

85. To the Gananoque, Perth and James Bay Railway Company, seventeen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 54,400

86. For a railway from St. Eustache to St. Placide, county of Two Mountains, eighteen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

87. For a railway from a point on the Intercolonial Railway through the Stewiacke Valley, on the line which will afford facilities of communication with the Iron Mines, Spring Side, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

88. For a railway from Yamaska to the River St. Francis, in the province of Quebec, ten miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

89. For a railway from Perth Centre station, on the New Brunswick Railway, to a point near Plaister Rock Island, in the province of New Brunswick, twenty-eight miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 89,600

90. For a railway from Fredericton to the village of Prince William, in the province of New Brunswick, twenty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

91. For a railway from a point on the Intercolonial Railway near Newcastle or via Douglastown to a point on the River Miramichi, opposite the town of Chatham, in the province of New Brunswick, six miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. $19,200

92. For a railway from a point on the Canadian Pacific Railway to Eganville, in the province of Ontario, twenty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

93. To the Belleville and North Hastings Railway Company, for seven miles of their railway, from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, in the province of Ontario, a subsidy (in addition to the subsidy of $1,500 per mile granted by 48-49 Victoria, chapter 59), not exceeding $1,700 per mile, nor exceeding in the whole..... 11,900

94. To the Napanee, Tamworth and Quebec Railway Company, for eighteen miles of their railway from Tamworth to Tweed, in lieu of the subsidy granted by 48-49 Victoria, chapter 59, a subsidy of..... 70,000

95. To the Albert Railway Company, for their railway from Salisbury to Hopewell, in the province of New Brunswick, which is a feeder to the Intercolonial Railway, in the form of a loan, repayable at such time and secured in such manner as the Governor in Council determines, a subsidy of..... 15,000

"The subsidies hereinbefore mentioned as to be granted to the companies named for that purpose shall be granted to such companies respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies have been granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall be so constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in the agreement to be made in each case by the company to the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council, and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister: Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements, and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By section 2 of this Act authority was given for the grant of a charter by the Governor in Council for the purpose of constructing a railway from Long Sault to the foot of Lake Temiscamingue.

By the Act 50-51 Vic., cap. 24, 1887 *(Assented to 23rd June, 1887).*

96. To the St. Catharines and Niagara Railway Company, for twelve miles of their railway from the city of St. Catharines to the bridge over the Niagara River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 38,400

97. To the Vaudreuil and Prescott Railway Company, for thirty miles of their railway from Vaudreuil towards Hawkesbury, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

98. To the Richmond Hill Junction Railway Company, for five miles of their railway from Richmond Hill Junction, on the Northern Railway of Canada, to Richmond Hill village, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000

99. To the Drummond County Railway Company, for thirty miles of their railway from Drummondville towards Nicolet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

100. To the Joggins Railway Company, for one and a quarter miles of their railway extending from the southern end of the portion subsidized by the Act 49 Victoria, chapter 10, to the wharfs, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 4,000

101. To the Moncton and Buctouche Railway Company, for two miles of their railway from the west end of the portion subsidized by the Act 49 Victoria, chapter 10, to Moncton, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 6,400

102. To the Beauharnois Junction Railway Company, for thirty miles of their railway from St. Martin's towards St. Anicet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

103. To the Harvey Branch Railway Company, for three miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600

104. To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway from the town of Brantford to the village of Hagarsville or the village of Waterford, or some intermediate point on the Canada Southern Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

105. To the Guelph Junction Railway Company, for sixteen miles of their railway from its junction with the Canadian Pacific Railway to the town of Guelph, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200

106. To the Massawippi Railway Company, for ten miles of their railway from a point on the Atlantic and North-western Railway near the village of Magog, to Ayer's Flat station, on the Massawippi Valley Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

107. To the Napanee, Tamworth and Quebec Railway Company, for four miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, to Tweed, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 12,800

108. To the Dominion Lime Company, for seven miles of their railway from a point on the Quebec Central Railway, in the township of Dudswell, to the Dudswell Lime Company's quarries, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400

109. To the South Norfolk Railway Company, for seventeen miles of their railway from Port Rowan to the town of Simcoe, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 54,400

110. To the Jacques Cartier Union Railway Company, extending and completing their railway, a subsidy of..... 20,000

111. For a line of railway from Mount Forest to Walkerton, twenty-four miles in length, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 76,800

112. To the Oshawa Railway and Navigation Company, for seven miles of their railway from Port Oshawa towards Raglan, a subsidy not exceeding $3,200 per mile nor exceeding in the whole..... 22,400

113. To the Saguenay and Lake St. John Railway Company, for thirty miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

114. To the Great Eastern Railway Company, for thirty miles of their railway from the River St. Francis to the Arthabaska Railway, at St. Grégoire station, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $96,000

115. To the Ontario and Pacific Railway Company, for six miles of their railway from the northern end of the portion subsidized by the Act 47 Victoria, chapter 8, to the town of Perth, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 19,200

116. To the Caraquet Railway Company, for seven miles of their railway from Lower Caraquet to Shippegan, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding in the whole .. 32,000

117. To the St. Lawrence and Lower Laurentian and Saguenay Railway Company, for the section of this railway from Grand Piles, on the St. Maurice River, to its junction with the Quebec and Lake St. John Railway, in lieu of the subsidy granted by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, for a line of railway from Grand Piles, on the St. Maurice River, to its junction with the Lake St. John Railway, a distance of about fifty miles, a subsidy of 217,600

118. To the St. John Valley and River du Loup Railway Company, for twenty-two miles of their railway from the village of Prince William towards the town of Woodstock, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 70,400

119. To the Lake Temiscamingue Railway Company, for four short sections of railway, in all about two miles in length, to overcome the rapids of the Ottawa River, known as "La Mi-Charge," "La Cave," "Les "Erables," and "La Montagne," and for the construction of wharfs and landing stages at these rapids, to connect the Canadian Pacific Railway at Mattawa with Lake Temiscamingue by steamboats, railways and other works (in lieu of a portion two miles in length, out of the eight miles of railway subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, under which about six miles of railway have already been built from the foot of Long Sault proper to the foot of Lake Temiscamingue, and in lieu also of the subsidy granted by the Act 49 Victoria, chapter 10), a subsidy of 12,400

120. To the Carillon and Grenville Railway Company, for twelve miles of their railway from St. Eustache to Sault au Récollet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

121. To the Minudie Branch Railway Company, for five and a half miles of their railway from its junction with the Joggins Railway, near the River Hébert railway bridge, to the village of Minudie, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 17,600

122. To the Lake Temiscamingue Colonization and Railway Company, for ten and a half miles of their railway from the Long Sault to Lake Kippewa, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 33,600

123. To the Leamington and St. Clair Railway Company, for two miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter 59, to the village of Comber, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 6,400

124. To the Cumberland Railway and Coal Company for fourteen miles of their railway from a point on the Spring Hill and Parrsboro' Railway, near Spring Hill, to a point on the railway between Oxford and New Glasgow, near Oxford village, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 44,800

125. To the Montreal and Champlain Junction Railway Company, a subsidy of..... $ 64,000

126. To the Quebec and Lake St. John Railway Company, for nine miles of their railway, the distance which the previous subsidies granted are short of covering from the city of Quebec to Lake St. John, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 28,800

127. To the Temiscouata Railway Company, for thirty miles of a branch of their railway from Edmundston towards the St. Francis River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 96,000

128. To the Cornwallis Valley Railway Company, for thirteen miles of their railway from Kentville to Kingsport, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 41,600

129. To the Nova Scotia Central Railway Company, for thirty-four miles of their railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 108,800

130. To the Tobique Valley Railway Company, for fourteen miles of their railway from Perth Centre station towards Plaister Rock Island, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, for a railway from Perth Centre station, on the New Brunswick Railway, to a point near Plaister Rock Island, a subsidy of..... 89,600

131. For a railway from Woodstock towards Centreville, twenty miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 64,000

132. For a railway bridge over the St. Lawrence River, at Coteau Landing on the line of the Canada Atlantic Railway, a subsidy of fifteen per cent on the value of the structure, not to exceed..... 180,000

133. To the Lake Erie, Essex and Detroit River Railway Company, for twenty-seven miles of their railway, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding..... 118,400

"For the purpose of granting corporate powers to persons or companies undertaking the construction of railways or parts of railways, mentioned in the next preceding section, for the construction of which no corporate powers exist at the time of the passing of this Act, the Governor in Council may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, as the Governor in Council shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies respectively; the other subsidies, including subsidies granted for railways over a line extending beyond a point to which any company hereinbefore mentioned by name is authorized to construct their railway, shall be granted to such companies as shall be approved by the Governor in Council, as having established, to his satisfaction, their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized, except as regards the subsidy for the bridge over the

St Lawrence River, upon which shall be paid fifteen per cent of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

"The granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"Notwithstanding anything contained in the Act forty-fifth Victoria, chapter fourteen, or in the Act forty-sixth Victoria, chapter twenty-five, the balances of the sums granted for a railway from St. Raymond to Lake St. John and to the Quebec and Lake St. John Railway Company by the said Acts respectively, which have not yet been paid by the Government, may be paid at any time within one year from the passing of this Act, subject to the conditions in the said Act contained."

By the Act 51 Vic., cap. 3, 1888 (*Assented to 22nd May, 1888*):—

134. To the Ottawa and Parry Sound Railway Company, for 22 miles of their railway from a point on the Canadian Pacific Railway to Eganville, in lieu of the subsidy granted by 49 Victoria, chapter 10, for a railway from a point on the Canadian Pacific Railway to Eganville, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 70,400 00

135. To the Nova Scotia Central Railway Company, for 46 miles of their railway, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 147,200 00

136. To the Montreal and Champlain Junction Railway Company, for 3 miles of their railway from the end of the present subsidized section, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 9,600 00

137. To the Massawippi Junction Railway Company, for their railway from a point on the Atlantic and North-west Railway, near the village of Magog, to Ayer's Flat station, on the Massawippi Valley Railway, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy of..... 32,000 00

138. To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of $31,500, to be paid out monthly as the work progresses, upon the certificate of the Chief Engineer of Government railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken, and for three miles of their railway extending from a point three miles east of Pembroke to Pembroke, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $9,600, provided that the entire work subsidized upon this railway shall be completed within four years from the passing of this Act, the subsidy granted by this Act not to exceed in the whole..... 41,100 00

139. To the Port Arthur, Duluth and Western Railway Company, for 84¾ miles of their railway from Port Arthur towards Gun Flint Lake, in lieu of the subsidies granted by 48-49 Victoria, chapter 59, and 49 Victoria, chapter 10, for the construction of a railway from Murillo Station to Crooked Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 271,200 00

140. To the Quebec and Lake St. John Railway Company, for 30 miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, being a transfer made at the request of the Saguenay and Lake St. John Railway Company of the subsidy granted to them by 50-51 Victoria, chapter 24, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000 00

141. To the Temiscouata Railway Company, for 20 miles of their branch railway from Edmundston towards the St. Francis River, in the province of Quebec, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy of..... $100,000 00

142. To the Quebec Central Railway Company, for the construction and completion of a line of railway from St. Francis Station to a point on the Atlantic and North-west Railway near Moose River, 90 miles, in lieu of the balance of the subsidy, unearned, granted by 47 Victoria, chapter 8, a subsidy not exceeding $21,191.54 per annum for twenty years, or a guarantee of a like sum for a like period as interest on the bonds of the company, such annual subsidy for twenty years representing a grant in cash of 288,000 00

143. To the Central Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 4,052 tons of used iron rails and fastenings, loaned to the St. Martin's and Upham Railway Company, now forming part of the Central Railway, which rails and fastenings stand in the Public Accounts as an asset for..... 83,612 54

144. To the Elgin, Petitcodiac and Havelock Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 2,201 tons of used iron rails and fastenings loaned to the Elgin Branch Railway, now forming part of the Elgin, Petitcodiac and Havelock Railway, which rails and fastenings stand in the Public Accounts as an asset for 44,252 82

145. To the Kent Northern Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 2,549 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 58,334 27

146. To the Halifax Cotton Company of Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 233 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 4,335 00

147. To the Steel Company of Canada, in Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company of 597 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 11,964 66

148. To the Albert Railway Company of New Brunswick, a grant as a subsidy (the section of road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 726 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... 14,665 45

149. To the Chatham Branch Railway of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the company) of 958 tons of used iron rails and fastenings loaned to the company, which rails and fastenings stand in the Public Accounts as an asset for..... $24,439 84

"All the lines, for the construction of which subsidies are granted, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and also the said subsidies respectively, payable in cash, shall be payable out of the Consolidated Revenue Fund of Canada by instalments, on the completion to the satisfaction of the Minister of Railways and Canals of each section of the railway of not less than 10 miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized."

By the Act 52 Vic., chap. 3, 1889. *(Assented to 2nd May, 1889)*:—

150. To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Ottawa, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $172,400 00

151. To the Ottawa and Gatineau Railway Company, for a line of railway from Hull station towards Le Désert, a distance of sixty-two miles, a subsidy not exceeding in the whole..... 320,000 00

152. To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway, from Lorette via Cap Rouge to Quebec, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

153. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, or some other point on the line of the Northern and Pacific Junction Railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 128,000 00

154. For a railway from St. Andrew's to the Canadian Pacific Railway, at or at any point east of the town of Lachute, in the county of Argenteuil, in the province of Quebec, seven miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400 00

155. For a railway from Truro, or a point between Truro and Stewiacke, to Newport or to Windsor, in the province of Nova Scotia, forty-nine miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 156,800 00

156. For a line of the Central Railway from the head of Grand Lake to the Intercolonial Railway, in the province of New Brunswick, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 128,000 00

157. To the Albert Southern Railway Company, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole 31,771 43

158. To the Baie des Chaleurs Railway Company, the balance remaining unpaid of the subsidy mentioned in the Act 49th Victoria, chapter 17, not exceeding in the whole 244,500 00

159. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria Branch of the Midland Railway to the village of Bancroft, in the county of Hastings, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole..... $145,000 00

160. To the Northern and Pacific Junction Railway Company, for a railway from Gravenhurst to Callander, the balance remaining unpaid of the subsidies granted by the Act 45th Victoria, chapter 14, and 46th Victoria, chapter 25, not exceeding in the whole.. 35,000 00

161. For a railway from some point on the Joggins Railway, near the Hébert River, to Young's Mills, in the province of Nova Scotia, a distance of five miles, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 16,000 00

162. To the St. Clair Frontier Tunnel Company, for the construction of a tunnel under the St. Clair River, from a point at or near Sarnia, to a point at or near Port Huron, a subsidy not exceeding in the whole..... 375,000 00

163. To the Pontiac and Renfrew Railway Company, for six miles of their railway from the north bank of the Ottawa River, opposite Braeside, or from Bristol Iron Mines, to the Pontiac Pacific Junction Railway, near the Quyon River, in the province of Quebec, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 19,200 00

164. To the Quebec, Montmorency and Charlevoix Railway Company, for thirty miles of their railway, from the east bank of the St. Charles River, to or near to Cap Tourmente, in the province of Quebec, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 96,000 00

165. To the Fredericton and St. Mary's Bridge Company, for a bridge over the St. John River, at Fredericton, in the province of New Brunswick, a subsidy not exceeding in the whole..... 30,000 00

166. To the Napanee, Tamworth and Quebec Railway Company, for seven miles of their railway, from a point at or near Yarker to a point at or near Harrowsmith, and to a company for three miles of railway from a point at or near Harrowsmith to a point at or near Sydenham, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 32,000 00

167. For a railway from a point near Sicamous, on the Canadian Pacific Railway, to a point on Lake Okanagan for fifty-one miles of such railway, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole..... 163,200 00

168. To the Cornwallis Valley Railway Company, for one mile of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, to Kingsport, in the province of Nova Scotia, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 3,200 00

169. To the Lake Témiscamingue Colonization and Railway Company, for fifteen miles of their railway, from Mattawa station on the Canadian Pacific Railway, towards the Long Sault, or from the Long Sault towards the said Mattawa station, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

170. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the parish of Saint-Michel des Saints, on the River Mattawin, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

171. To the Kingston, Smith's Falls and Ottawa Railway Company, for twenty miles of their railway, from the city of Kingston towards Smith's Falls, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 64,000 00

172. To the South Ontario Pacific Railway Company, for forty-nine and one-half miles of their railway, from Woodstock to Hamilton, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 158,400 00

173. For a railway from St. Césaire to St. Paul d'Abbotsford, in the province of Quebec, five miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000 00

174. To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction station on the Intercolonial Railway, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

175. To the Drummond County Railway Company, for four and one-half miles of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, to Ball's Wharf, on the St. Lawrence River, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 14,400 00

176. To the St. Catharines and Niagara Central Railway Company, for twenty miles of their railway, from the end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Catharines, towards the city of Hamilton, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

177. To the Quebec and Lake St. John Railway Company, for twenty miles of their railway, from the end of the section of thirty miles from Lake St. John towards Chicoutimi, subsidized by the Act 51 Victoria, chapter 3, towards Chicoutimi, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000 00

178. To the Grand Trunk, Georgian Bay and Lake Erie Railway Company, for fifteen miles of their railway, from the village of Tara or some point between Tara and Hepworth, to the town of Owen Sound, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

179. To the Hereford Railway Company, for fifteen miles of their railway, from Cookshire to a junction with the Quebec Central Railway at Dudswell, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

180. To the Massawippi Junction Railway Company, for fifteen miles of their railway, from Ayer's Flat to Coaticook, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

181. To the Brockville, Westport and Sault Ste. Marie Railway Company, for twenty miles of their railway, from a point at or near Newboro', towards Palmer's Rapids, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 64,000 00

182. To the Thousand Islands Railway Company, for four miles of their railway, from a point near the St. Lawrence River, in Gananoque village, to Gananoque Junction of the Grand Trunk Railway, and for thirteen miles of their railway, from Gananoque Junction of the Grand Trunk Railway to a junction with the Brockville, Westport and Sault Ste. Marie Railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 54,400 00

183. For a railway from Cape Tourmente towards Murray Bay, twenty miles, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $64,000 00

184. To the Amherstburg, Lake Shore and Blenheim Railway Company, for twenty miles of their railway, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000 00

"So much of the subsidy of three thousand two hundred dollars per mile, which under the provisions of the Act forty-ninth Victoria, chapter seventeen, and of this Act, may be paid to the Baie des Chaleurs Railway Company in respect of the thirty miles of their railway, from the seventieth to the hundredth mile, eastward from Metapediac, shall be applicable to the section of the said railway, comprised between the fortieth and the seventieth mile thereof, eastward from Metapediac, instead of to the said first mentioned section of thirty miles, making six thousand four hundred dollars per mile applicable to the secondly mentioned section of thirty miles; but the foregoing provision shall be subject to the condition that the said company undertake to complete the thirty miles of their railway from the seventieth to the hundredth mile eastward from Metapediac within a reasonable time, not to exceed four years, to be fixed by Order in Council, and without any further subsidy from the Government of Canada, and that they deposit with the Minister of Railways and Canals, as security to the Crown that they will well and truly carry out their undertaking, their bonds to the amount of two hundred thousand dollars.

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized, except as respects the tunnel under the St. Clair River, in which case there shall be paid fifteen per cent of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

"The granting of such subsidies, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"And for the removal of doubts it is hereby declared and enacted that the provision in the Act passed in the fifty-first year of Her Majesty's reign, and chaptered three, relating to the Pontiac Pacific Junction Railway Company, extended and extends the several subsidies in aid of the said company for four years from the passing of the said Act, that is to say, from the twenty-second day of May, one thousand eight hundred and eighty-eight."

By the Special Act, 52 Vic., cap. 5, 1889 *(Assented to 2nd May, 1889)*:—

185. In order to enable the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company to complete their railway from Regina to some point on the South Saskatchewan River at or near Saskatoon, and thence northward to Prince Albert, the Governor in Council may enter into a contract with such company for the transport of men, supplies, materials and mails,

for twenty years, and may pay for such services during the said term, eighty thousand dollars per annum in manner following, that is to say:—the sum of fifty thousand dollars to be paid annually on the construction of the railway to a point at or near Saskatoon, such payment to be computed from the date of the completion of the railway to such point; and the remaining thirty thousand dollars annually on the extension of the railway to Prince Albert, such payment to be computed from the date of such last mentioned completion: Provided that if the second portion of the said railway is not built and operated to Prince Albert within two years after the completion of the railway to the South Saskatchewan as aforesaid, the payment of fifty thousand dollars shall cease until the whole railway is finished to Prince Albert.

By the Act 53 Vic., cap. 2, 1890 *(Assented to 16th May, 1890)*:—

186. To the Montreal and Ottawa Railway Company, for thirty miles of their railway, from the western end of the thirty-six miles subsidized by the Act 50-51 Victoria, chapter 24, towards Ottawa, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole ..... $ 96,000

187. To the Waterloo Junction Railway Company, for eleven miles of their railway, from Waterloo to Elmira, a subsidy not exceeding $3,200 per mile, and not exceeding in the whole 35,200

188. To the Northern and Pacific Junction Railway Company, for a railway from Gravenhurst to Callander, the balance remaining unpaid of the subsidies granted by the Acts 45 Victoria, chapter 14, and 46 Victoria, chapter 25, not exceeding in the whole ... 600

189. For a railway from Woodstock via London to Chatham, in the province of Ontario, thirty miles in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, for a railway from Ingersoll via London to Chatham, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 256,000

190. To the St. Catharines and Niagara Railway Company, for fourteen miles of their railway, from the end of the twenty miles subsidized by the Act 52 Victoria, chapter 3, to Hamilton, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 44,800

191. To a railway from Ottawa to Morrisburg, fifty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 166,400

192. To the Erie and Huron Railway Company, for twenty-two miles of their railway from Petrolea via Oil Springs to Dresden, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 70,400

193. To the Brockville, Westport and Sault Ste. Marie Railway Company, for a railway from Brockville to Westport, the balance remaining unpaid of the subsidy granted by the Act 48-49 Victoria, chapter 59, not exceeding in the whole 83,000

194. To the Manitoulin and North Shore Railway Company, for thirty miles of their railway from Little Current to the Algoma Branch of the Canadian Pacific Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

195. To the Port Arthur, Duluth and Western Railway Company, for five miles of their railway, being a branch of the main line of railway to the Kakabeka Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 16,000

196. To the Lake Erie and Detroit River Railway Company, for fifty miles of their railway, on a line to be fixed by the Governor in Council, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 160,000

197. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for sixteen miles of their railway, from Bobcaygeon to the Midland Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 51,200

198. To the Kingston, Smith's Falls and Ottawa Railway Company, for thirty-six miles of their Railway, from the north-east end of the twenty miles subsidized by the Act 52 Victoria, chapter 3, to Smith's Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 115,200

199. To the Ottawa and Parry Sound Railway Company, for thirty miles of their railway, from Eganville to Barry's Bay, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

200. To the Belleville and Lake Nipissing Railway Company, for thirty miles of their railway,, from Belleville to Tweed and thence to Bridgewater, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

201. To the Cobourg, Northumberland and Pacific Railway Company, for thirty miles of their railway from Cobourg to the Ontario and Quebec Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

202. To the St. Stephen and Milltown Railway Company, for three and a half miles of their railway, from the town of St. Stephen to the town of Milltown, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 11,200

203. To the Woodstock and Centreville Railway Company, for six miles of their railway, from the western end of the twenty miles subsidized by the Act 50-51 Vic., chap. 24, to the International boundary between the province of New Brunswick and the state of Maine, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 19,200

204. For a railway from a point at or near Fredericton, via Oromocto and Gagetown, to a point on the New Brunswick Railway west of Westfield station, for thirty miles thereof, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000

205. To the Central Railway Company of New Brunswick, for four and a half miles of their railway, the distance which the previous subsidy granted is short of covering, from the head of Grand Lake to the Intercolonial Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 14,400

206. To the Montreal and Western Railway Company, for seventy miles of their railway, from St. Jérôme, north-westerly towards Désert, in the province of Quebec, in lieu of the subsidy granted by the Act 49 Vic., chap. 10, a subsidy not exceeding $5,161 per mile, nor exceeding in the whole 361,270

"Provided, that the subsidy hereby granted to the Montreal and Western Company may be paid by instalments on the completion of each section of the railway as follows, that is to say :—

SECTIONS.	Approximate length in miles.
St. Jérôme to Shawbridge	8
Shawbridge to St. Sauveur	4
St. Sauveur to Ste. Adèle	6
Ste. Adèle to Lac à la Fourche	6
Lac à la Fourche to Ste. Agathe	6½
Ste. Agathe to St. Faustin	14
St. Faustin to St. Jovite	7½
St. Jovite to Summit Lake	8
Summit Lake to La Chute aux Iroquois	7
La Chute aux Iroquois towards Désert	3

"Such instalments to be proportionate to the value of the portions so completed in comparison with that of the whole work undertaken, to be established as aforesaid."

207. For seventy-five miles of the railway from Shelburne, in the county of Shelburne, and from Liverpool, in the county of Queen's towards Annapolis, in the province of Nova Scotia, to be so contracted for as to secure the construction to both Shelburne and Liverpool, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 240,000

208. To the Inverness and Richmond Railway Company, for fifty miles of their railway from Port Hawkesbury to Broadcove, a subsidy not exceeding $1,000 per mile, nor exceeding in the whole..... 50,000

209. To the International Railway Company, for a railway from Sherbrooke to the international boundary, the balance remaining unpaid of the subsidy granted by the Act 46 Vic., chapter 25, not exceeding in the whole 3,840

210. For completing the Montreal and Sorel Railway from St. Lambert to Sorel 40,000

211. To the Pontiac Pacific Junction Railway Company, for seven and a half miles of their railway, from Hull to Aylmer, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 24,000

212. To the Montreal and Lake Maskinongé Railway Company, for three and a half miles of their railway, the distance which the subsidy granted by the Act 49 Vic., chapter 10, is short of covering from St. Félix to Lake Maskinongé, in the parish of St. Gabriel, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 10,200

213. To the Great Eastern Railway Company, for a bridge over the Nicolet River, and also a bridge on the St. Francis River, a subsidy of 15 per cent on the value of the structure, not to exceed 37,500

214. To the Drummond County Railway Company, for twenty-four miles of their railway, from Drummondville to Ste. Rosalie, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 76,800

215. To the Great Northern Railway Company, for fifteen miles of their railway, from, at or near Montcalm to the Canadian Pacific Railway, between Joliette and St. Félix de Valois, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

216. To the Lake Temiscamingue Colonization Railway Company, for twenty miles of their railway, from the northern end of the fifteen miles subsidized by the Act 52 Vic., chapter 3, to the Long Sault, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000

217. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from the northern end of the 15 miles subsidized by the Act 52 Victoria, chapter 3, towards the parish of St. Michel des Saints, on the River Mattawa, in the province of Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000

218. To the St. Lawrence and Adirondack Railway Company, for eighteen miles of their railway, from Valleyfield to Huntingdon, on the Montreal and Champlain Junction Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600

219. To the Quebec Central Railway Company, for ninety miles of their railway, from St. Francis Station, on the Quebec Central Railway, to a point on the Atlantic and North-western Railway,

near Moose River, or from a point on the Quebec Central Railway between the Chaudière River and Tring Station, to a point on the International Railway at or near Lake Megantic, in lieu of the subsidy granted by the Act 51 Victoria, chapter 3, a subsidy not exceeding $21,191.54 per annum for twenty years, or a guarantee of a like sum for a like period, as interest on the bonds of the company, such annual subsidy for twenty years representing a grant in cash of $288,000

220. To the Quebec and Lake St. John Railway Company, for a railway bridge over the St. Charles River, to give access to the city of Quebec, a subsidy not to exceed in the whole $30,000; also for twelve miles of their railway from Lorette via Charlesbourg to Quebec, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $38,400..... 68,400

221. For a railway from Summerside to Richmond Bay, in the province of Prince Edward Island, three miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600

222. To the Columbia and Kootenay Railway Company, for thirty-five miles of their railway, from the outlet of Kootenay Lake to a point on the Columbia River as near as practicable to the junction of the Kootenay and Columbia Rivers, a subsidy not exceeding $3,200 per mile, nor to exceed in the whole..... 112,000

223. For a railway from a point on the Intercolonial Railway through the Stewiacke Valley on a line which will afford facilities of communication with the Iron Mines, Springside, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

224. For a railway from Fredericton to the village of Prince William in the province of New Brunswick, twenty-two miles, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

225. To the St. John Valley and Rivière du Loup Railway Company, for twenty-two miles of their railway from the village of Prince William towards the town of Woodstock, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

226. To the Témiscouata Railway Company, for sixteen miles of their railway, from the west end of the twenty miles of their branch railway from Edmundston, subsidized by the Act 51 Victoria, chapter 3, towards the St. Francis River, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200

227. For a railway from the north end of the fourteen miles for which a subsidy was granted by the Act 50 and 51 Victoria, chapter 24, to the Tobique Valley Railway Company, from Perth Centre towards Plaister Rock Island, eleven miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 35,200

228. To the Orford Mountain Railway Company, for thirty one miles of their railway, between Eastman and Kingsbury, a subsidy not exceeding $3,200 per mile, nor exceedingin the whole 99,200

229. For a railway from Lachine Bank, on a line of the Grand Trunk Railway, to a point at or near Rivière des Prairies, a distance of fifteen miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; the other subsidies,

including subsidies granted for railways over a line extending beyond a point to which any company hereinbefore mentioned by name is authorized to construct its railway, shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council,—except the Erie and Huron Railway, which shall be completed within two years from the first day of July next. And they shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specifying an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make. The location, also, of every such line of railway shall be subject to the approval of the Governor in Council. And all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as regards the Erie and Huron Railway Company, upon which payment shall be made only upon the completion of the work—except, also as regards the subsidies to the Inverness and Richmond Railway, which shall be paid on the completion of each ten mile section, in accordance, as nearly as practicable, with the agreement between the company and the municipality of Inverness, and with section four of the Act of the Legislature of Nova Scotia, 1890, intituled: An Act to enable the county of Inverness to borrow money—except, also, as regards the subsidies to the Great Eastern Railway Company for bridges over the Nicolet and St. Francis Rivers, and to the Quebec and Lake St. John Railway for the bridge over the St. Charles River, upon which shall be paid fifteen per cent of the value of work done, on monthly progress estimates certified by the Chief Engineer and upon the approval of the Minister of Railways and Canals—and except also the subsidy granted to the Quebec Central Railway Company, the first annual payment upon which shall be made at the end of twelve months from the date of the Chief Engineer's certificate of the completion of the work, and each subsequent payment at the end of each twelve months thereafter, for the term of twenty years.

"The granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing running powers or traffic arrangements or other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those subsidized, as the Governor in Council determines."

By the special Act 53 Vic., ch. 5, 1890 *(Assented to 16th May, 1890)*:—

230. In order to enable the Calgary and Edmonton Railway Company to construct so much of their railway as reaches from a point on the line of the Canadian Pacific Railway Company within the town of Calgary to a point on the North Saskatchewan River near Edmonton, the Governor in Council may enter into a contract with such company for the transport of men, supplies, materials and mails for twenty years, and may pay for such services during the said term, eighty thousand dollars per annum, in manner following, that is to say: the sum of eighty thousand dollars to be paid annually on the construction of the railway from Calgary to a point on the North Saskatchewan River near Edmonton,—such payment to be computed from the date of the completion of the railway between such points: Provided that the Governor General in Council may order such sums to be paid in semi-annual instalments, and may permit the company to assign the same by way of security for any bonds or securities which may be issued by the company in respect of the company's undertaking.

By 54-55 Victoria, ch. 8, 1891 *(Assented to 30th Sept., 1891)*:—

231. To the Great Northern Railway Company, for a railway from a point at or near New Glasgow or St. Lin to or near to Montcalm, in the province of Quebec, eighteen miles, the balance

remaining unpaid of the subsidy, not exceeding $3,200 per mile, granted by the Act forty-ninth Victoria, chapter ten, nor exceeding in the whole ..... $ 28,100 00

232. To the Quebec and Lake St. John Railway Company, for the railway bridge over the St. Charles River to give access to the city of Quebec, the difference between the amount already paid to the company and the sum of $30,000 mentioned as not to be exceeded by the Act fifty-third Victoria, chapter two, a subsidy not exceeding 5,250 00

233. To the Oshawa Railway Company, for seven miles of their railway from Port Oshawa towards Raglan, in lieu of the subsidy for a like amount granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 22,400 00

234. To the St. Lawrence, Lower Laurentian and Saguenay Railway Company, for the section of their railway from Grand Piles, on the St. Maurice River to its junction with the Quebec and Lake St. John Railway, the balance remaining unpaid of the subsidy granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole 92,784 00

235. To the Great Eastern Railway Company, for thirty-miles of their railway, from the River St. Francis to the Arthabaska Railway at St. Grégoire station, the balance remaining unpaid of the subsidy, not exceeding $3,200 per mile, granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole 79,700 00

236. To the South Ontario Pacific Railway Company, for forty-nine and one-half miles of their railway from Woodstock to Hamilton, in the province of Ontario, in lieu of the subsidy for a like amount granted by the Act fifty-second Victoria, chapter three, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 158,400 00

237. To the Montreal and Ottawa Railway Company (formerly the Vaudreuil and Prescott Railway Company), for thirty miles of their railway from Vaudreuil towards Hawkesbury, the balance remaining unpaid of the subsidy granted by the Act passed in the session held in the fiftieth and fifty-first years of Her Majesty's reign, chapter twenty-four, not exceeding in the whole 46,040 00

238. To the Tobique Valley Railway Company, for fourteen miles of their railway from Perth Centre station towards Plaister Rock Island, in lieu of the subsidy for a like amount granted by the Act passed in the session held in the fiftieth and fifty first years of Her Majesty's reign, chapter twenty-four, a subsidy not exceeding $6,400 per mile, nor exceeding in the whole 89,600 00

239. To the Kingston, Smith's Falls and Ottawa Railway Company for fifty-six miles of their railway from the city of Kingston to Smith's Falls, in lieu of the subsidies, not to exceed $179,200, granted by the Acts fifty-second Victoria, chapter three, and fifty-third Victoria, chapter two, a subsidy not exceeding $12,534 per annum, to be paid in semi-annual instalments of $6,267 each, for twenty years, which represents a grant in cash of 179,200 00

"Provided, that upon the completion of twenty-eight miles of the said railway a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole fifty-six miles; Provided also, that the company may deposit with the Minister of Finance and Receiver General a sum not exceeding $1,170,000, in consideration whereof there shall be paid to the company, for twenty years, a semi-annual annuity calculated on a basis of three and one-half per cent on the amount so deposited; Provided further, that the Governor in Council may permit the company to assign the said subsidy and annuity to trustees by way of security for any bonds or securities which may be issued by the company in respect of their undertaking."

240. To the Brockville, Westport and Sault Ste. Marie Railway Company, for twenty miles of their railway, from a point at or near Newboro' towards Palmer's Rapids, in the province of Ontario, in lieu of a subsidy for a like amount granted by the Act fifty-second Victoria, chapter three, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $64,000 00

"Provided that the subsidy hereby granted to the Brockville, Westport and Sault Ste. Marie Railway Company may be paid by instalments, on the completion of each section of the railway as follows, that is to say:—

Sections.	Length in miles.
From, at or near Newboro' to Westport.....	4
From Westport towards Palmers Rapids.....	16

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also of every such line of railway, shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, the first semi-annual payment upon which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of twenty-eight miles of the railway, and each subsequent payment at the end of each six months thereafter, for the term of twenty years,—except also as to the Quebec and Lake St. John Railway Company, the subsidy to which shall be paid upon the completion of the work,—except also as to the Brockville, Westport and Sault Ste. Marie Railway Company, the subsidy to which shall be paid as follows: on the completion of that portion of the said road from, at or near Newboro' to Westport, a distance of four miles, the sum of twelve thousand eight hundred dollars, and on the completion of the remaining sixteen miles from Westport towards Palmer's Rapids, the sum of fifty-one thousand two hundred dollars.

"Within one month after the commencement of each session of Parliament, whilst any of the said moneys are being paid out, there shall be laid before Parliament a statement showing all payments of such moneys during the then next preceding year, the names of the respective persons to whom such payments have been made, and the amounts paid them respectively, together with the engineer's report upon which pay-

ments have been recommended, and copies of all contracts between the Government and the company under which the said subsidies are authorized to be paid.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running power or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

By the Act 55-56 Victoria, chap. 5, 1892 *(Assented to 9th July, 1892)* :—

241. To the Lake Erie and Detroit River Railway Company, for fifty-eight miles of their railway from a point at or near Cedar Creek to the town of Ridgetown, in lieu of the subsidies granted to the Lake Erie and Detroit River Railway Company by the Act 53 Victoria, chapter 2, and to the Amherstburg, Lake Shore and Blenheim Railway Company by the Act 52 Victoria, ch. 3. $224,000 00

242. To the Ottawa, Arnprior and Parry Sound Railway Company, for fifty-five miles of their railway from Barry's Bay towards the Northern Pacific Junction Railway, a subsidy not exceeding $6,400 per mile on the first twenty-seven and a half miles out from Barry's Bay, and not exceeding $3,200 per mile on the second twenty-seven and a half miles, nor exceeding in the whole. 264,000 00

243. To the Canadian Pacific Railway Company or to the Columbia and Kootenay Railway and Navigation Company, for a railway from a point on the Canadian Pacific Railway at or near Revelstoke to the head of Arrow Lake, for twenty-five miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 80,000 00

244. To the Tobique Valley Railway Company, for a railway from the north end of the eleven miles for which a subsidy was granted by the Act 53 Victoria, chapter 2, to Plaister Rock Island, for 3 miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 9,600 00

245. To the Monfort Colonization Railway Company, for twenty-one miles of their railway from Lachute, St. Jérôme or a point at or near St. Sauveur, on the line of the Montreal and Western Railway, to Monfort and westward, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 67,200 00

246. To the Ontario, Belmont and Northern Railway Company, for ten miles of their railway from the Belmont iron mines to the Canadian Pacific Railway and the Central Ontario Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 32,000 00

247. To the Montreal and Champlain Junction Railway Company, the balance remaining unpaid of the subsidies granted by the Acts 50-51 Victoria, chapter 24, and 51 Victoria, chapter 3, a subsidy of. 15,100 00

248. To the Buctouche and Moncton Railway Company, for thirty-two miles of their railway from Moncton to Buctouche, the balance remaining unpaid of the subsidy, not exceeding $3,200 per mile, granted by the Acts 49 Victoria, chapter 10, and 50-51 Victoria, chapter 24, not exceeding in the whole. 35,480 00

249. To the Cobourg, Northumberland and Pacific Railway Company, for nineteen miles of their railway from Cobourg to the Ontario and Quebec Railway (in addition to the subsidy granted by the Act 53 Victoria, chapter 2), a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 60,800 00

250. For a railway from the parish of St. Rémi, in the county of Napierville, to St. Cyprien in the said county, for twelve miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 38,400 00

251. To the Inverness and Richmond Railway Company (or any other company undertaking the work), for twenty-five miles of their railway from a point on the Cape Breton Railway, at or near Orangedale, to Broadcove, a subsidy not exceeding $3,200 per mile, in lieu of the subsidy of $50,000 granted to the said railway company by 53 Victoria, chapter 2, and on the same conditions, not exceeding in the whole 80,000 00

252. To the Nicola Valley Railway Company, for twenty-five miles of their railway from a point on the Canadian Pacific Railway at or near Spence's Bridge towards Nicola Lake 80,000 00

253. To the Lotbinière and Megantic Railway Company, for fifteen miles of their railway from a point at or near St. Jean Deschaillons towards Glen Lloyd, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000 00

254. To the Stewiacke and Lansdowne Railway Company, for a railway from a point on the Intercolonial Railway, through the Stewiacke Valley, on a line which will afford facilities of communication with the iron mines at Springside, Upper Stewiacke and Musquodoboit settlements, twenty-five miles, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 80,000 00

255. To the Philipsburg Junction Railway and Quarry Company, for six and seven-hundredths miles of their railway from Stanbridge Station to Philipsburg, in the county of Missisquoi, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 21,600 00

256. To the Kingston, Napanee and Western Railway Company, for three miles of their railway from a point at or near Harrowsmith to a point at or near Sydenham, in lieu of the subsidy granted for this section of road by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 9,600 00

257. For a railway from Cape Tourmente towards Murray Bay, in the province of Quebec, twenty miles, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 64,000 00

258. To the Stewiacke and Lansdowne Railway Company, for a railway from Truro, or a point between Truro and Stewiacke, to Newport or to Windsor, in the province of Nova Scotia, for forty-nine miles of such railway, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 156,800 00

259. To the Restigouche and Victoria Railway Company, for fifteen miles of their railway from Campbelton towar s Grand Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000 00

260. For a railway from St. Johns to Ste. Rosalie, thirty-two miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 102,400 00

261. For a railway from St. Placide to St. Andrew's, eight miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.. 25,600 00

262. For a railway to complete the connection between Sydney and Louisburg, in the county of Cape Breton, for twenty-eight miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 89,600 00

263. To the Belleville and Lake Nipissing Railway Company, for thirty miles of their railway from Belleville to Tweed and thence to Bridgewater, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 96,000 00

264. To the Kingston, Smith's Falls and Ottawa Railway Company, for fifty-six miles of their railway from the city of Kingston to Smith's Falls, in lieu of the subsidies, not to exceed $179,200, granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy calculated on a basis of three and a half per cent on the amount of such subsidies so granted, to be paid in semi-annual instalments for such period not exceeding twenty-one years, as the company may elect, which represents a grant in cash of 179,200 00

" Provided, that upon the completion of twenty-eight miles of the said railway a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole fifty-six miles : Provided also, that the company may deposit with the Minister of Finance and Receiver General, a sum not exceeding $1,170,000, in consideration whereof there shall be paid to the company for such period not exceeding twenty years as the company may elect, a semi-annual annuity calculated on a basis of three and a half per cent on the amount so deposited. Provided further, that the Governor in Council may permit the company to assign the said subsidy and annuity to trustees by way of security for any bonds or securities which may be issued by the company in respect of their undertaking."

265. To the St. Catharines and Niagara Central Railway Company, for thirty-four miles of their railway from the city of St. Catharines to the city of Hamilton, in lieu of the subsidies, not to exceed $108,000, granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy calculated on a basis of three and a half per cent on the amount of the said subsidies, to be paid in semi-annual instalments for such period, not exceeding twenty years, as the company may elect, representing a grant in cash of $108,000 : Provided that, upon the completion of ten miles of said railway, a semi-annual subsidy may be paid proportionate to the value of the portion so completed in comparison with that of the whole thirty-four miles. Provided also, that the company may deposit with the Minister of Finance and Receiver General a sum not exceeding $400,000, in consideration whereof there shall be paid by the Government to the company, for such period not exceeding twenty years, as the company may elect, a semi-annual annuity, calculated on a basis of three and a half per cent on the amount so deposited, or a guarantee of a like sum, as interest on the bonds of the company : Provided further, that the company, with the approval of the Governor in Council, may assign the said subsidy and annuity to trustees by way of security for principal, or interest of any bonds or securities which may be issued by the company in respect of their undertaking, and the subsidy last above mentioned to the St. Catharines and Niagara Central Railway Company shall be paid in instalments, the first semi-annual payment upon which shall be made at the end of the six months from the date of the Chief Engineer's certificate of the completion of the first ten miles of railway, and each subsequent payment at the end of six months thereafter, for the term of twenty years or less. It is a condition of this subsidy that the sum not exceeding $400,000 above mentioned shall be deposited with the Finance Minister before January 1st, 1893.

266. To the Woodstock and Centreville Railway Company, for a railway from Woodstock towards Centreville, twenty miles, in lieu of the subsidy granted by 50-51 Victoria, chapter 24, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $64,000 00

267. To the Brockville, Westport and Sault Ste. Marie Railway Company, for the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding $3,200 per mile, and also for the balance remaining unpaid of the subsidy granted by the Act 53 Victoria, chapter 2, nor exceeding in the whole..... 96,800 00

268. To the New Glasgow Iron, Coal and Railway Company, for a railway from Eureka Junction on the Intercolonial Railway to a point at or near Sunnybrae, including a branch line to the charcoal iron furnace at Bridgeville, for twelve and a half miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 40,000 00

269. To the Thousand Island Railway Company, for an extension of their railway to connect with the Brockville, Westport and Sault Ste. Marie Railway, the Kingston, Napanee and Western Railway, the Kingston, Smith's Falls and Ottawa Railway, or the waters of the Rideau Canal, and an extension across the mouth of the Gananoque River, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 44,000 00

Payable, $14,000 on the completion of the last named or southern extension, and the balance of said subsidy, being $30,000, on the completion of the first named or northern extension of their railway.

270. To the Manitoulin and North Shore Railway Company, for thirty miles of their railway from Little Current to the Algoma Branch of the Canadian Pacific Railway, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $96,000 00

271. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for sixteen miles of their railway from the end of the line subsidized by the Act 53 Victoria, chapter 2, at the junction with the Midland Railway, to Pontypool, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 51,200 00

272. For seventy-five miles of the railway from Sand Point, Shelburne Harbour, in Nova Scotia, to Annapolis Royal, in the county of Annapolis and to a junction at or near New Germany on the Nova Scotia Central Railway, with a view to future construction to Liverpool, in lieu of the subsidy of a like amount granted by the Act 53 Victoria, chapter 2, for the same length of railway from Shelburne and from Liverpool, towards Annapolis, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 240,000 00

273. To the Kingston, Napanee and Western Railway Company, for twenty miles of their railway, being extensions or branches in the counties of Peterborough, Hastings, Addington, Frontenac or Leeds, towards iron deposits, a subsidy not exceeding $3,200 per mile, payable in instalments regulated by the length of each of the said extensions, additions or branches, the subsidy not exceeding in the whole..... 64,000 00

274. To the St. John Valley and Rivière du Loup Railway Company, for ten miles of their railway from the north end of the line subsidized by the Act 53 Victoria, chapter 2, towards the town of Woodstock, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000 00

275. To the Cobourg, Northumberland and Pacific Railway Company, for thirty miles of their railway from Cobourg to the Ontario and Quebec Railway, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 96,000 00

276. To the Ottawa, Arnprior and Parry Sound Railway Company, for thirty miles of their railway, from Eganville to Barry's Bay, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 96,000 00

277. To the Ottawa, Arnprior and Parry Sound Railway Company, for twenty-two miles of their railway from a point on the Canadian Pacific Railway to Eganville, in lieu of the subsidy granted by the Act 51 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 70,400 00

278. To the Lake Témiscamingue Colonization Railway Company, for thirty-five miles of their railway from Mattawa to the Long Sault, in lieu of the subsidies granted by the Acts 52 Victoria, chapter 3, and 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 112,000 00

279. To the Témiscouata Railway Company, for twelve miles of their railway from the north end of the section of the St. François Branch subsidized by the Act 51 Victoria, chapter 3, being the first twelve miles on the section subsidized by the Act 53 Victoria, chapter 2, a subsidy not exceeding $1,800 per mile, in addition to the subsidy already granted, and not exceeding in the whole 21,600 00

280. To the Tilsonburg, Lake Erie and Pacific Railway Company, for sixteen miles of their railway from Port Burwell to Tilsonburg, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 51,200 00

281. To the Woodstock and Centreville Railway Company, for six miles of their railway from the west end of their twenty miles subsidized by the Act 50-51 Victoria, chapter 24, to the international boundary between the province of New Brunswick and the state of Maine, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 19,200 00

282. To the Lake Témiscamingue Colonization Railway Company, for 15 miles of their railway from the Long Sault to the crossing of the Kippewa River, a subsidy not exceeding $3,200 per mile—and a subsidy of fifteen per cent on the value of a wooden truss bridge over the Ottawa River near Mattawa, not exceeding $15,000,—nor exceeding in the whole 63,000 00

283. To the Goderich and Wingham Railway Company, for thirty-one miles of their railway from Goderich to Wingham, via Port Albert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 99,200 00

284. To the Joliette and St. Jean de Matha Railway Company, for eight miles of their railway from St. Félix de Valois to St. Jean de Matha, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 25,600 00

285. To the Bracebridge and Baysville Railway Company, for fifteen miles of their railway from Bracebridge towards Baysville, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 48,000 00

286. To the Nipissing and James Bay Railway Company, for twenty-five miles of their railway from, at or near North Bay station on

the Canadian Pacific Railway towards James Bay, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 80,000 00

287. For a railway from a point on the Intercolonial Railway between Ste. Flavie and Little Métis station to Matane, for fifty miles of such railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 160,000 00

288. To the Ontario and Pacific Railway Company, for fifty-three and eighty-seven hundredths miles of their railway from Cornwall to Ottawa, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 172,400 00

289. For a railway from a point on the line of the Canadian Pacific Railway on the Isle Jésus, in the county of Laval, towards St. Eustache, for twelve miles of such railway, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, to the Carillon and Grenville Railway Company, for twelve miles of their railway, from St. Eustache to Sault au Récollet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

290. For a railway from St. Eustache to St. Placide, in the county of Two Mountains, for eighteen miles of such railway, in lieu of the subsidy granted by the Act 49 Victoria, chapter 10, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 57,600 00

291. To the Port Arthur, Duluth and Western Railway Company, the balance remaining unpaid of the subsidy granted by the Act 51 Victoria, chapter 3, not exceeding, with the amount already paid, $3,200 per mile, nor exceeding in the whole..... 114,125 00

292. To the Drummond County Railway Company for four and six-tenths miles of their railway from Bull's Wharf, on the St. Lawrence River, near Nicolet, to Ste. Rosalie Junction, an excess of distance by the constructed line over the subsidies heretofore voted for a railway between the said points, $3,200 per mile, not exceeding in the whole..... 14,720 00

293. To the St. Lawrence and Adirondack Railway Company, for five and forty-two hundredths miles of their railway, from Huntingdon towards the international boundary, which, with the distance between Valleyfield and Huntingdon, twelve and fifty-eight hundredths miles, makes up the distance of eighteen miles named in the 53 Vic., chap. 2, granting a subsidy to this company, and for five and forty-hundredths miles from the east end of the eighteen miles referred to to the international boundary, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 25,024 00

" The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively ; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make ; the location also of every such line of railway shall be subject to the approval of the Governor in Council ; and all the said subsidies respectively shall be payable out of the Consolidated

Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as to subsidies with respect to which it is hereinbefore otherwise provided, and except also as to the subsidy granted to the Kingston, Smith's Falls and Ottawa Railway Company, and the subsidy granted to the St. Catharines and Niagara Central Railway Company, the first semi-annual payments upon both of which shall be made at the end of six months from the date of the Chief Engineer's certificate of the completion of their railways respectively, and each subsequent payment at the end of each six months thereafter, for the term of twenty years or less.

. "The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines."

294. Notwithstanding the expiration of the time limited by the Act 47 Victoria, chapter 8, and by the contract entered into with the Pontiac Pacific Junction Railway Company, the Governor in council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act.

295. Notwithstanding the expiration of the time limited by the Act 52 Victoria, chapter 3, and by the contract entered into with the Quebec and Lake St. John Railway Company, the Governor in Council may pay the balance remaining unpaid of the subsidy granted by the said Act to the said company, according as it becomes due and payable in accordance with the said contract, and subject to the terms and conditions applicable to the said subsidy under the terms of the said Act; and notwithstanding anything contained in the Act 50-51 Victoria, chapter 24, the Governor in Council may also pay to the said company the balance remaining unpaid of the subsidy granted to the company by the said Act, amounting to $12,800, on the four miles of their road from the north end of the main line subsidized towards Roberval.

By the Act 56 Vic., chap. 2, 1893 (*Assented to 1st April, 1893*):—

296. To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidized by the Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction station on the Intercolonial Railway, in the province of Quebec, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 64,000 00

297. To the United Counties Railway Company, for thirty-two miles of their railway, from a point at or near the town of Iberville to St. Hyacinthe, and thence towards Sorel, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, for a railway from St. Johns to Ste. Rosalie, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 102,400 00

298. To the Ontario, Belmont and Northern Railway Company, for ten miles of their railway, divided into two sections: first, from the Belmont Iron Mines to Marmora village; second, from Marmora village to the junction with the Ontario Central Railway, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 32,000 00

299. To the Central Ontario Railway Company, for twenty miles of their railway, from Coe Hill or Gilmore, or some point between

Coe Hill and Gilmore, to Bancroft, via L'Amable, or as near thereto as practicable, in lieu of the subsidy granted by the Act 48-49 Victoria, chapter 59, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 64,000 00

300. To the Quebec and Lake St. John Railway Company, for thirty miles of their railway, from Lake St. John towards Chicoutimi, the balance remaining unpaid of the subsidy granted by the Act 51 Victoria, chapter 3, not exceeding in the whole 81,040 00

301. To the Irondale, Bancroft and Ottawa Railway Company, for fifty miles of their railway, from the Victoria branch of the Midland Railway to the village of Bancroft, in the county of Hastings, the balance remaining unpaid of the subsidy granted by the Act 47 Victoria, chapter 8, and again granted by the Act 52 Victoria, chapter 3, not exceeding in the whole 145,000 00

302. To the Beauharnois Junction Railway Company, for thirty miles of their railway, from Ste. Martine towards St. Anicet, the balance remaining unpaid of the subsidy granted by the Act 50-51 Victoria, chapter 24, not exceeding in the whole 3,500 00

303. To the St. Stephen and Milltown Railway Company, for three and a half miles of their railway, from the town of St. Stephen to the town of Milltown, in lieu of the subsidy granted by the Act 53 Victoria, chapter 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 11,200 00

304. To the Quebec, Montmorency and Charlevoix Railway Company, for thirty miles of their railway, from the east bank of the River St. Charles, to or near to Cape Tourmente, in the province of Quebec, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole.. 30,400 00

305. To the Ottawa and Gatineau Valley Railway Company, for sixty-two miles of their railway, from Hull station towards Le Désert, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole 89,248 00

306. To the Grand Trunk, Georgian Bay and Lake Erie Railway Company, for fifteen miles of their railway, from the village of Tara, or some point between Tara and Hepworth, to the town of Owen Sound, in the province of Ontario, in lieu of the subsidy granted by the Act 52 Victoria, chapter 3, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 48,000 00

307. To the Nova Scotia Central Railway Company (or to such person or persons or company as in the opinion of the Minister or acting Minister of Justice are entitled to the same) for eighty miles of their railway, from Lunenburg, on the east coast of Nova Scotia, westward to a point in the district of New Germany, together with a spur about three-fourths mile long to Bridgewater railway wharf, and from a point thirty-three and a half miles from Lunenburg and running to Middleton on the Windsor and Annapolis Railway, of unpaid subsidies granted by the Acts 50-51 Victoria, chapter 24, and 51 Victoria, chapter 3, an amount not exceeding in the whole 4,500 00

308. To the Great Northern Railway Company, for eighteen miles of their railway, from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the province of Quebec, the balance remaining unpaid of the subsidy granted by the Act 54-55 Victoria, chapter 8, not exceeding in the whole 25,600 00

309. To the Great Northern Railway Company, for fifteen miles of their railway, from, at or near Montcalm to the Canadian Pacific

Railway between Joliette and St. Felix de Valois, in lieu of the subsidy granted by the Act 53 Victoria, chap. 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 48,000 00

310. To the Montfort Colonization Railway Company, for twenty-one miles of their three-feet gauge railway from Lachute, St. Jérôme, or a point at or near St. Sauveur, on the line of the Montreal and Western Railway, to Montfort and westward, in lieu of the subsidy granted by the Act 55-56 Victoria, chapter 5, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 67,200 00

311. To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway, from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the parish of St. Michel des Saints, on the river Mattawa, in the province of Quebec, and for fifteen miles of their railway from the north end of the fifteen miles above referred to, towards the parish of St. Michel des Saints on the river Mattawa, in the province of Quebec, in lieu of the subsidies granted by the Acts 52 Victoria, chap. 3, and 53 Victoria, chap. 2, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

312. To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge, or some other point on the Northern Pacific Junction Railway, in the province of Ontario, the balance remaining unpaid of the subsidy granted by the Act 52 Victoria, chapter 3, not exceeding in the whole..... 97,600 00

313. To the Jacques Cartier Union Railway Company, for extending and completing their railway, in lieu of the subsidy granted by the Act 50-51 Victoria, chapter 24, a subsidy of..... 20,000 00

314 To the Oshawa Railway Company, for seven miles of their railway and branches as follows: from Port Oshawa to a point at or near Edmondson's Falls mill site, near Mill Street, in the town of Oshawa (this portion being known as the "Lake" section of the said railway); thence to a point at or near the town hall in the town of Oshawa, and thence to the Oshawa station of the Grand Trunk Railway Company of Canada (this portion being known as the "Town" or "Northern" section of the said railway)—in lieu of the subsidy granted by the Act 54-55 Victoria, chapter 8, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 22,400 00

All the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council.

"The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

"All the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed

in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as follows :—

"(*a.*) The subsidy to the Ontario, Belmont and Ottawa Railway Company, which shall be paid as follows : on the completion of the first section, an instalment proportionate to the value of the said section in comparison with that of the ten miles hereby subsidized, to be established as aforesaid, and the balance of the said subsidy on the completion of the second section ;

"(*b.*) The subsidy to the Oshawa Railway Company, which shall be paid as follows : on the completion of the "Town" or "Northern" section, an instalment proportionate to the value of the said section in comparison with that of the seven miles hereby subsidized, to be established as aforesaid, and the balance of the said subsidy, on the completion of the "Lake" section of the said railway."

By the Act 57-58 Vic., cap. 4, 1894. *(Assented to, 23rd July, 1894)* :—

315. To the Bracebridge and Baysville Railway Company, for fifteen miles of their railway from Bracebridge towards Baysville, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 48,000

316. To the Brockville, Westport and Sault Ste. Marie Railway, the balance remaining unpaid of the subsidy granted by chapter 3 of 1889, not exceeding $3,200 per mile, and also the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, which was re-granted by chapter 5 of 1892 ; the whole not exceeding 86,800

317. To the Tilsonburg, Lake Erie and Pacific Railway Company, for sixteen miles of their railway, from Port Burwell to Tilsonburg, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 51,200

318. To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway, from the town of Brantford to the village of Hagarsville or the village of Waterford, or some intermediate point on the Canada Southern Railway, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, not exceeding $3,200 per mile, nor exceeding in the whole 4,790

319. To the St. Catharines and Niagara Central Railway Company, for 34 miles of their railway from the city of St. Catharines to the city of Hamilton, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 108,800

320. To the Montreal and Ottawa Railway Company (formerly the Vaudreuil and Prescott Railway Company), for thirty miles of their railway from Vaudreuil towards Hawkesbury, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887 ; and for 30 miles of their railway from the western end of the 30 miles first mentioned towards Ottawa, the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, not exceeding $3,200 per mile ; the whole not exceeding..... 118,400

321 Notwithstanding the expiration of the time limited by chapter 2 of 1890, and by the contract entered into with the Quebec Central Railway Company, and notwithstanding anything otherwise in the said chapter 2 contained, the Governor in Council may pay the subsidy granted by the said chapter to the said company at the present worth of the twenty annual payments mentioned in the said chapter (interest computed at four per cent), for and upon the completion of its railway extending from a point between the Chaudière River and Tring Station to a point on the International Railway at or near Lake Megantic, and upon the inspection and acceptance of the same by the Chief Engineer of Railways and Canals, the sum in all of..... 288,000

322. To the Philipsburg Junction Railway and Quarry Company, for $\frac{67}{100}$ mile of their railway from Stanbridge Station to Philipsburg, in the county of Missisquoi and a branch to Missisquoi Bay, the balance remaining unpaid of the subsidy granted by chapter 5 of 1892, not exceeding $3,200 per mile, nor exceeding in the whole ..... $ 2,912

323. To the Joliette and St. Jean de Matha Railway Company, for 8 miles of their railway from St. Félix de Valois to St. Jean de Matha, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 23,600

324. To the Lake Temiscamingue Colonization Railway Company, for their railway from Mattawa to the foot of the Kippewa Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $160,000,—also 15 per cent on the value of a wooden truss bridge over the Ottawa River near Mattawa, not to exceed $15,000 in all, in lieu of the subsidies granted by chapter 5 of 1892,—also the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, for their railway from Long Sault to Lake Kippewa, a subsidy not exceeding $3,200 per mile of railway and 15 per cent on the value of the bridges,—also, a sum of $1,750 additional per mile on their said railway from Mattawa to the foot of the Kippewa Lake; the whole not exceeding 274,940

325. For a railway from St. Placide to St. Andrews, 8 miles, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 25,600

326. For a railway from St. Eustache to St. Placide, in the county of Two Mountains, for 18 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 57,600

327. For a railway from a point on the line of the Canadian Pacific Railway on Isle Jésus, in the county of Laval, towards St. Eustache, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, to the Carillon and Grenville Railway Company, for 12 miles of their railway, from St. Eustache to Sault au Récollet, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

328. For a railway from the parish of St. Rémi, in the county of Napierville, to St. Cyprien, in the said county, for 12 miles of such railway, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 38,400

329. To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of $31,500, to be paid out monthly as the work progresses, upon the certificate of the chief engineer of government railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken; and for 3 miles of their railway extending from a point 3 miles east of Pembroke to Pembroke, in the province of Ontario, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole $9,600, in lieu of the subsidy granted by chapter 3 of 1888; provided that the entire work subsidized upon this railway shall be completed within 4 years from the passing of this Act; the subsidy granted by this Act not to exceed in the whole 41,100

330. To the Pontiac Pacific Junction Railway Company, for the construction or acquisition of 7½ miles of railway, from Hull to Aylmer, in lieu of the subsidy granted by chapter 2 of 1890, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. $ 24,000

331. To the Pontiac Pacific Junction Railway Company, for 85 miles of their railway from Aylmer to Pembroke, the balance remaining unpaid of the subsidy granted by chapter 8 of 1884, less the subsidy granted for the line from Hull to Aylmer, provided the Ottawa River is crossed at some point not east of Lapasse, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole 73,172

332. To the Harvey Branch Railway Company, for 3 miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, the balance remaining unpaid of the subsidy granted by chapter 24 of 1887, not exceeding $3,200 per mile, nor exceeding in the whole..... 4,046

333. For a railway from a point on the Intercolonial Railway near Newcastle via Douglastown, to a point on the River Miramichi opposite the town of Chatham, in the province of New Brunswick, 6 miles, in lieu of the subsidy granted by chapter 10 of 1886, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 19,200

334. For a railway from some point on the Joggins Railway, near the Hebert River, to Young's Mills, in the province of Nova Scotia, a distance of 5 miles, in lieu of the subsidy granted by chapter 3 of 1889, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 16,000

335. To the Woodstock and Centreville Railway Company, for a railway from Woodstock to the international boundary between the province of New Brunswick and the state of Maine, 26 miles, in lieu of the subsidies granted by chapter 24 of 1887 and chapter 2 of 1890 a subsidy not exceeding $3,200 per mile nor exceeding in the whole..... 83,200

336. For 90 miles of the railway from Newport or Windsor to Truro, or to a point between Truro and Stewiacke, and from a point on the said railway to a point at or near Eastville, and from Eastville through the valley of the Musquodoboit River towards a point on the proposed Dartmouth branch of the Intercolonial, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile; and also for a railway bridge over the Shubenacadie River on the line of the said railway, a subsidy of 15 per cent on the value of the structure; the whole not exceeding..... 300,000

337. To the Nipissing and James Bay Railway Company, for 25 miles of their railway from, at or near North Bay Station on the Canadian Pacific Railway towards James Bay, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile; also for 43 miles of their railway from North Bay towards Lake Tamagaming, a subsidy not exceeding $3,200 per mile; the whole not exceeding..... 217,000

338. To the Lotbinière and Mégantic Railway Company, for 15 miles of their railway, in addition to the 15 miles already subsidized and built, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

339. To the Drummond County Railway Company, for 30 miles of their railway from St. Leonard northerly towards a junction with the Intercolonial Railway at Chaudière Junction, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000

340. For a railway from Lime Ridge, in the county of Wolfe, in the province of Quebec, northerly through the county of Wolfe and into the county of Megantic, a distance not exceeding 50 miles from Lime Ridge, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 160,000

341. To the Strathroy and Western Counties Railway Company, for 25 miles of their railway from St. Thomas through the counties of Elgin and Middlesex, towards Forest Station or Park Hill, on the Grand Trunk Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

342. To the Parry Sound Colonization Railway Company, for 20 miles of their railway east from Parry Sound, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

343. To the Manitoulin and North Shore Railway Company, for 10 miles of their railway from Little Current to Nelson, on the Algoma Branch of the Canadian Pacific Railway, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000

344. To the United Counties Railway Company for 32 miles of their railway from Iberville to Sorel, in addition to the 32 miles already subsidized, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 102,400

345. To the Joliette and St. Jean de Matha Railway Company, for 12 miles of their railway from St. Jean de Matha to Ste. Emelie de L'Energie, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400

346. To the Great Northern Railway Company, for 22 miles of their railway, from the eastern end of the 15 miles subsidized by chapter 2 of 1893 to a point between Joliette and St. Félix de Valois, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

347. To the Quebec and Lake St. John Railway Company, for 2 miles of the Chicoutimi branch of their railway, from the east end of the 50 miles already subsidized and built eastward to deep water at Chicoutimi, a subsidy not exceeding $3,200 per mile ; also for 12 miles from the 52nd mile on the Chicoutimi branch to Ha Ha Bay, a subsidy not exceeding $3,200 per mile ; the whole not exceeding..... 44,800

348. To the Pontiac and Ottawa Railway Company, for 23 miles of their railway from the point of divergence from the Pontiac Railway to Ferguson's Point, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 73,600

349. To the Ottawa and Gatineau Valley Railway Company, for 20 miles of their railway from the eastern end of the 62 miles already subsidized towards Désert, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

350. To the Canada Eastern Railway Company for 6 miles of their railway from the town of Chatham to Black Brook, a subsidy not exceeding $3,200 per mile ; also for 4 miles of their railway for a branch to the village of Nelson, a subsidy not exceeding $3,200 per mile ; the whole not exceeding..... 32,000

351. For a railway from Cross Creek Station, on the Canada Eastern Railway to Stanley village, in the county of York, in the province of New Brunswick, 6 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 19,200

352. To the Restigouche and Victoria Railway Company, for 20 miles of their railway from the western end of the 15 miles subsidized by chapter 5 of 1892, towards Grand Falls, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 64,000

353. To the Central Railway Company of New Brunswick, for 15 miles of their railway from Chipman station to the Newcastle coal fields, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... $ 48,000

354. To the Tobique Valley Railway Company, for 15 miles of their railway from the present terminus at Plaister Rock easterly, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 48,000

355. Towards the restoration or renewal of the railway bridge on the South-eastern Railway over the Yamaska River at Yamaska, a subsidy equal to one-third of the actual cost of the renewal of the bridge, but the grant not to exceed in the whole..... 50,000

356. To the Boston and Nova Scotia Coal and Railway Company, for 10½ miles of their railway from the north end of the section already subsidized to Broad Cove, a subsidy not exceeding $3,-200 per mile; also for 25 miles of their railway from a point on the Cape Breton Railway at or near Orangedale towards Broad Cove, in lieu of the subsidy granted by chapter 5 of 1892, a subsidy not exceeding $3,200 per mile; the whole not exceeding 113,600

357. For a railway from Port Hawkesbury towards Cheticamp, 25 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 80,000

358. To the Manitoba North-western Railway Company, for 100 miles of the extension of their main line from its present western terminus towards Prince Albert,—the company relinquishing 3,200 acres of the land grant per mile, and the whole road to be operated as a continuous line of railway under one management, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 320,000

359. For a line of railway from the junction of the Elk and Kootenay Rivers to Coal Creek, a distance of 34 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 108,800

360. For a railway from Abbotsford Station on the Mission Branch of the Canadian Pacific Railway to the town of Chilliwack, 21 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 67,200

361. To the Nicola Valley Railway Company, for 28 miles of their railway from the western end of the section of their road subsidized by chapter 5, of 1892, towards Nicola Lake, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 89,600

362. To the Nakusp and Slocan Railway Company, for 38 miles of their railway from the town of Nakusp to a point at or near the Forks of Carpenter Creek, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 121,600

363. To the Pontiac and Kingston Railway Company, for 22 miles of a railway from Portage du Fort to Upper Thorne Centre, via Shawville, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 70,400

364. To the New Glasgow Iron, Coal and Railway Company, for 5 miles of their railway, from Sunnybrae to Kerrogare, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole.... 16,000 00

365. To the South Shore Railway Company, for 35 miles of their railway from Yarmouth towards Shelburne and Lockport, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. 112,000 00

366. To the Cape Breton Railway Extension Company, for 30 miles of railway from Port Hawkesbury to St. Peter's, on their line of railway from Port Hawkesbury to Louisbourg, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

367. For a railway from a point on the Intercolonial Railway between Norton and Sussex Stations towards Havelock, 20 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole. $ 64,000 00

368. For a railway from St. John to Barneville, for a distance of 10 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 32,000 00

369. For a line of railway from Cap de la Magdeleine to connect with the Piles Branch of the Canadian Pacific Railway, 3 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 9,600 00

370. To the Canada Eastern Railway Company, for an extension of one mile from the western end of their railway, to connect with the Canadian Pacific Railway, a subsidy not exceeding..... ..... 3,200 00

371. To the Great Northern Railway Company, for 30 miles of their railway from its junction with the Lower Laurentian Railway near St. Tite, in the vicinity of the River St. Maurice, westward, in lieu of the subsidy granted to the Maskinongé and Nipissing Railway Company by chapter 2 of 1893, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 96,000 00

372. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for 16 miles of their railway from Bobcaygeon to the Midland Railway, and for another 16 miles from the end of the first mentioned 16 miles to Pontypool, in lieu of the subsidies granted by chapter 2 of 1890, and chapter 5 of 1892, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 102,400 00

373. To the Montfort Colonization Railway Company, for 12 miles of their railway from the end of the 21 miles already subsidized westward to a point on the Rouge River, in the county of Argenteuil, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

374. For a railway from a point on the Caraquet Railway, at or near Pokemouche siding, towards Tracadie village, 12 miles, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole..... 38,400 00

The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railway and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized,—except as to subsidies with respect to which it is hereinbefore otherwise provided, and except also as to the

subsidy granted to the Great Northern Railway Company by chapter two of 1893, for fifteen miles from Montealm to the Canadian Pacific Railway, which shall be paid as follows: on the completion of the eighteen miles from New Glasgow to Montcalm and of two miles out of the fifteen miles from Montcalm to the Canadian Pacific Railway, an instalment proportionate to the value of the ten miles out of the total mileage subsidized by chapter two of 1893, to be established as aforesaid, and the balance of the said subsidy on the completion of the remaining thirteen miles of the said railway.

No subsidies were authorized by 58-59 Vict. (1895), nor by 59 Vict. (1896).

By the Act 60-61, chapter 4, 1897 *(Assented to 29th June, 1897)*.

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and includes the amount expended upon any bridge up to and not exceeding twenty-five thousand dollars, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway, nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated), which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile:—

375. To the Ottawa and New York Railway Company, for $53\frac{87}{100}$ miles of their railway from Cornwall to Ottawa, in lieu of the subsidy granted by chapter 5 of the statutes of 1892,

376. To the Kingston, Smith's Falls and Ottawa Railway Company, for 101 miles of their railway from Kingston, or a junction with the Grand Trunk Railway at Rideau or some other point near Kingston, to Ottawa, in lieu of the subsidy granted by chapter 5 of 1892;

377. For a railway from a point on the Canadian Pacific Railway, at or near either Welsford or Westfield, or between the said two points, to Gagetown, in the county of Queen's, New Brunswick, not exceeding 30 miles, in lieu of the subsidy granted by chapter 2 of 1890;

378. To the Cobourg, Northumberland and Pacific Railway Company, fer 50 miles of their railway from Cobourg to the Ontario and Quebec Railway, in lieu of the subsidies granted by chapter 5 of 1892;

379. To the Ottawa and Gatineau Railway Company, for 20 miles of their railway from the end of the 62nd mile subsidized towards Désert, in lieu of the subsidies granted by chapter 4 of 1894;

380. To the Great Northern Railway Company, for 9 miles of their railway, being shortage in distance between Montcalm and St. Tite;

381. To the St. Gabriel de Brandon and Ste. Emélie de l'Energie Railway Company, for 15 miles of their railway from St. Gabriel to Ste. Emélie de l'Énergie, and 5 miles from a point on the main line to St. Jean de Matha, making in all 20 miles, in lieu of the subsidy granted by chapter 4 of 1894;

382. To the Central Railway Company of New Brunswick, for 15 miles of their railway from Chipman Station to Newcastle Coal Fields, county of Queen's, in lieu of the subsidy granted by chapter 4 of 1894;

383. To the Gulf Shore Railway Company, for 5½ miles of their railway from the end of the section subsidized to Tracadie and thence to Big Tracadie, New Brunswick;

384. For a railway from Campbellton, on the Intercolonial Railway, towards Grand Falls, New Brunswick, a distance of 20 miles, commencing at Campbellton, in lieu of the subsidy granted by chapter 4 of 1894;

385. To the Pontiac Pacific Junction Railway Company, for 7½ miles of their railway from Hull to Aylmer, in lieu of the subsidy granted by chapter 2 of 1890;

386. To the Schomberg and Aurora Railway Company, for 15 miles of their railway from a point on the Grand Trunk Railway between King and Newmarket to Schomberg, in the province of Ontario;

387. To the Tilsonburg, Lake Erie and Pacific Railway Company, for $3\frac{50}{100}$ miles of their railway from the present terminus, through Tilsonburg to the Michigan Central Railway, in the province of Ontario.

388. To the Ottawa, Arnprior and Parry Sound Railway Company, for 52 miles of their railway, from the crossing of the Northern Pacific Junction Railway to 55 miles west of Barry's Bay, and also for 4 miles of their railway across Parry Island;

389. To the Pembroke Southern Railway Company, for 20 miles of their railway from Pembroke to Golden Lake, in the province of Ontario;

390. To the Ontario and Rainy River Railway Company, for 80 miles of their railway from the Port Arthur, Duluth and Western Railway to Rainy Lake, in the province of Ontario;

391. To the Strathroy and Western Counties Railway Company, for 7 miles of their railway, commencing at a point at or near Caradoc Station on the Canadian Pacific Railway and extending to the town of Strathroy;

392. To the Phillipsburg Railway and Quarry Company, for $\frac{66}{100}$ mile of their railway from the end of the subsidized section to the government wharf at Phillipsburg;

393. To the United Counties Railway Company, for 1 mile of their railway from Johnson to St. Grégoire Station, in the province of Quebec;

394. To the St. Lawrence and Adirondack Railway Company, for 13½ miles of their railway from Beauharnois to Caughnawaga, in the province of Quebec;

395. To the East Richelieu Valley Railway Company, for 24 miles of their railway from Iberville to St. Thomas, boundary of Missisquoi County, in the province of Quebec;

396. To the Portage du Fort and Bristol Branch Railway Company, for 15 miles of their railway to a point at or near Shawville, in the county of Pontiac;

397. For a railway from a point at or near Windsor Junction, on the Intercolonial Railway, to Upper Musquodoboit, for a distance of 40 miles;

398. To the St. Stephens and Milltown Railway Company, for $1\frac{14}{100}$ mile of their railway from Milltown to St. Stephen, in the province of New Brunswick;

399. For a railway from Sunny Brae to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysboro', in the province of Nova Scotia, a distance of 65 miles;

400. For a railway from Port Hawkesbury, Nova Scotia, to Port Hood and Broad Cove, 53 miles, in lieu of the subsidy granted by chapter 4 of 1894;

401. For a railway from a point on the Central Railway in the county of Lunenburg, Nova Scotia, to the town of Liverpool, via the village of Caledonia, or to the village of Caledonia via Liverpool, or for any part thereof, the whole distance not exceeding 62 miles;

402. For a railway from Indian Garden on the line of the Central Railway, to Shelburne, in the province of Nova Scotia, a distance of 35 miles;

403. To the Coast Railway Company of Nova Scotia, for 61 miles of their railway from Yarmouth to Port Clyde, in the province of Nova Scotia;

404. For a railway from Brookfield Station on the Intercolonial Railway to Eastville, 30 miles;

405. To the Great Northern Railway Company, for 35 miles of their railway from St. Jérôme, in the province of Quebec, to Hawkesbury, in the province of Ontario;

406. To the Drummond County Railway Company, for 42½ miles of their railway from Moose Park to Chaudière River, provided that the amount of the said subsidy shall be refunded to the Government of Canada in the event of the company's railway from Ste. Rosalie to Chaudière River being purchased or leased for a term of years by the government.

3. The Governor in Council may grant the subsidies hereinafter mentioned to the railway companies and towards the construction of the railways also hereinafter mentioned, that is to say :—

407. To the Great Northern Railway Company, for 67 miles of their railway between Montcalm and its junction with the Lower Laurentian Railway near St. Tite, in the vicinity of the St. Maurice River, the balance remaining unpaid of the subsidies granted by chapter 2 of 1893, and by chapter 4 of 1894, between these points, a subsidy not exceeding $3,200 per mile, nor exceeding in the whole	$ 182,400 00
408. To the Pontiac Pacific Junction Railway Company, for 85 miles of their railway from Aylmer to Pembroke, also for bridging the Ottawa River, the balance remaining unpaid of the subsidy granted by chapter 8 of 1884, and by chapter 4 of 1894, not exceeding	114,272 00
409. To the Ottawa and Gatineau Railway Company, for 62 miles of their railway from Hull towards Désert, in the province of Quebec, the balance remaining unpaid of the subsidy granted by chapter 2 of 1893, not exceeding in the whole	35,872 00
410. To the Grand Trunk Railway Company of Canada, for a subsidy towards the rebuilding and enlargement of the Victoria Bridge at Montreal over the St. Lawrence River, 15 per cent upon the amount expended thereon, not exceeding	300,000 00
411. To the Montfort Colonization Railway Company, for 33 miles of their railway from Montfort Junction to Arundel, in the province of Quebec, a subsidy not exceeding $2,000 per mile, nor exceeding in the whole	66,000 00
412. To the Irondale, Bancroft and Ottawa Railway Company, the balance remaining unpaid of the subsidy for the last five miles of the company's railway ; the eastern terminus to be either at the village of Bancroft or at some point near the Hastings Road, in the township of Herschell, in lieu of the subsidy granted by chapter 2 of 1893, not exceeding in the whole	16,000 00
413. To the Great Northern Railway Company, towards the construction of a railway bridge over the Ottawa River at Hawkesbury, 15 per cent upon the amount expended thereon, not exceeding	52,500 00
414. For a railway and traffic bridge over the Ottawa River at Nepean Point, between the city of Ottawa and the city of Hull, 15 per cent upon the amount expended thereon, not exceeding	112,500 00

4. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively ; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and

upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

5. The granting of such subsidies respectively shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

6. The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to subsidies with respect of which it is hereinbefore otherwise provided.

7. Any company receiving a subsidy as aforesaid, in excess of $3,200 per mile, shall be bound to carry Her Majesty's mails for a term of ten years free of charge over the portion of railway subsidized.

By the Special Act 60-61 Victoria, Chapter 5, 1897. *(Assented to 29th June, 1897.)*

1. Subject to the conditions hereinafter mentioned, the Governor in Council may grant to the Canadian Pacific Railway Company a subsidy towards the construction of a railway from Lethbridge, in the district of Alberta, through the Crow's Nest Pass to Nelson, in the province of British Columbia (which railway is hereinafter called "the Crow's Nest Line,") to the extent of eleven thousand dollars per mile thereof, and not exceeding in the whole the sum of three million six hundred and thirty thousand dollars, payable by instalments on the completion of each of the several sections of the said railway of the length respectively of not less than ten miles, and the remainder on the completion of the whole of the said railway; provided that an agreement between the Government and the company is first entered into in such form as the Governor in Council thinks fit, containing covenants to the following effect, that is to say:—

On the part of the company:

(*a*.) That the company will construct or cause to be constructed, the said railway upon such route and according to such descriptions and specifications and within such time or times as are provided for in the said agreement, and, when completed, will operate the said railway for ever;

(*b*.) That the said line of railway shall be constructed through the town of Macleod, and a station shall be established therein, unless the Governor in Council is satisfied by the company that there is good cause for constructing the railway outside the limits of the said town, in which case the said line of railway shall be located and a station established at a distance not greater than five hundred yards from the limits of the said town;

(*c*.) That so soon as the said railway is opened for traffic to Kootenay Lake, the local rates and tolls on the railway and on any other railway used in connection therewith and now or hereafter owned or leased by or operated on account of the company south of the company's main line in British Columbia, as well as the rates and tolls between any point on any such line or lines of railway and any point on the main line of the company throughout Canada, or any other railway owned or leased by or operated on account of the company, including its lines of steamers in British Columbia, shall be first approved by the Governor in Council or by a railway commission, if and when such commission is established by law, and shall at all times thereafter and from time to time be subject to revision and control in the manner aforesaid;

(*d*.) That a reduction shall be made in the general rates and tolls of the company as now charged, or as contained in its present freight tariff, whichever rates are now the lowest, for carloads or otherwise, upon the classes of merchandise hereinafter mentioned, westbound, from and including Fort William and all points east of Fort

William on the company's railway to all points west of Fort William on the company's main line, or on any line of railway throughout Canada owned or leased by or operated on account of the company, whether the shipment is by all rail line or by lake and rail, such reduction to be to the extent of the following percentages respectively, namely :—

Upon all green and fresh fruits, 33⅓ per cent ;

Coal oil, 20 per cent ;

Cordage and binder twine, 10 per cent ;

Agricultural implements of all kinds, set up or in parts, 10 per cent ;

Iron, including bar, band, Canada plates, galvanized, sheet, pipe, pipe-fittings, nails, spikes and horse shoes, 10 per cent ;

All kinds of wire, 10 per cent ;

Window glass, 10 per cent ;

Paper for building and roofing purposes, 10 per cent ;

Roofing felt, box and packing, 10 per cent ;

Paints of all kinds and oils, 10 per cent ;

Live stock, 10 per cent ;

Wooden ware, 10 per cent ;

Household furniture, 10 per cent ;

And that no higher rates than such reduced rates or tolls shall be hereafter charged by the company upon any such merchandise carried by the company between the points aforesaid ; such reductions to take effect on or before the first of January, one thousand eight hundred and ninety-eight ;

(*e.*) That there shall be a reduction in the company's present rates and tolls on grain and flour from all points on its main line, branches or connections, west of Fort William to Fort William and Port Arthur and all points east, of three cents per one hundred pounds, to take effect in the following manner :—One and one-half cent per one hundred pounds on or before the first day of September, one thousand eight hundred and ninety-eight, and an additional one and one-half cent per one hundred pounds on or before the first day of September, one thousand eight hundred and ninety-nine ; and that no higher rates than such reduced rates or tolls shall be charged after the dates mentioned on such merchandise from the points aforesaid ;

(*f.*) That the Railway Committee of the Privy Council may grant running powers over the said line of railway and all its branches and connections, or any portions thereof, and all lines of railway now or hereafter owned or leased by or operated on account of the company in British Columbia south of the company's main line of railway, and the necessary use of its tracks, stations and station grounds, to any other railway company applying for such grant upon such terms as such committee may fix and determine, and according to the provisions of The Railway Act and of such other general Acts relating to railways as are from time to time passed by Parliament ; but nothing herein shall be held to imply that such running powers might not be so granted without the special provision herein contained ;

(*g.*) That the said railway, when constructed, together with that portion of the company's railway from Dunmore to Lethbridge, and all lines of railway, branches, connections and extensions in British Columbia south of the main line of the company in British Columbia shall be subject to the provisions of The Railway Act and of such other general Acts relating to railways as are from time to time passed by Parliament ;

(*h.*) That if the company or any other company with whom it shall have any arrangement on the subject shall, by constructing the said railway or any part of it, as stipulated for in the said agreement, become entitled to and shall get any land as a subsidy from the Government of British Columbia, then such lands, excepting therefrom those which in the opinion of the Director of the Geological Survey of Canada (expressed in writing) are coal-bearing lands, shall be disposed of by the company or by such other company to the public according to regulations and at prices not exceeding these prescribed from time to time by the Governor in Council, having regard to the then existing provincial regulations applicable thereto ; the expression "lands" including all mineral and timber thereon which shall be disposed of as aforesaid, either with or without the land, as the Governor in Council may direct :

(*i.*) That if the company or any other company with whom it shall have any arrangement on the subject shall, by constructing the said railway or any part of it as stipulated for in the said agreement, become entitled to and shall get any lands as a subsidy from the Government of British Columbia which in the opinion of the Director of the Geological Survey of Canada (expressed in writing) are coal-bearing lands, then the company will cause to be conveyed to the Crown, in the interest of Canada, a portion thereof to the extent of fifty thousand acres, the same to be of equal value per acre as coal lands with the residue of such lands. The said fifty thousand acres to be selected by the Government in such fair and equitable manner as may be determined by the Governor in Council, and to be thereafter held or disposed of or otherwise dealt with by the Government as it may think fit on such conditions, if any, as may be prescribed by the Governor in Council, for the purpose of securing a sufficient and suitable supply of coal to the public at reasonable prices, not exceeding two dollars per ton of two thousand pounds free on board cars at the mines.

And on the part of the Government, to pay the said subsidy by instalments as aforesaid.

2. The company shall be bound to carry out in all respects the said agreement, and may do whatever is necessary for that purpose.

3. In order to facilitate such financial arrangements as will enable the company to complete the railway as aforesaid without delay and to acquire and consolidate with it the railway from Dunmore to Lethbridge, hereinafter called "the Alberta Branch," which, under the authority of chapter thirty-eight of the statutes of 1893, it now operates as lessee, and is under covenant to purchase, the company may issue bonds which will be a first lien and charge and be secured exclusively upon the said Alberta Branch and Crow's Nest Line together in the same way and with the same effect as if both the said pieces of railway to be so consolidated were being built by the company as one branch of its railway within the meaning of section one of chapter fifty-one of the statutes of 1888, and that section shall apply accordingly, such first lien to be subject to the payment of the purchase money of the Alberta Branch, as provided for in the said covenant to purchase.

By the Act 62–63 Vic., chapter 7 (*Assented to 11th August, 1899*).

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway, nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile:—

415. To the Central Ontario Railway Company, for an extension of their railway from, or from near, either Coe Hill or Rathbun Station on the company's railway to, or near to Bancroft, not exceeding 21 miles, in lieu of the subsidy granted by chapter 5 of 1892;

416. To the Great Northern Railway Company, for a railway between Montcalm and St. Tite Junction, on the Lower Laurentian Railway, Quebec, not exceeding 53½ miles; and for a branch from their main line to Shawenegan Falls, Quebec, not exceeding 6½ miles.

417. To the Phillipsburg Railway and Quarry Company, shortage in the extension of their railway from a point on the company's line at or near the end of the subsidized section, to the government wharf at Phillipsburg, Quebec, not exceeding $\frac{66}{100}$ of a mile;

418. To the Strathroy and Western Counties Railway Company, for a line from Strathroy, Ontario, via Adelaide and Arkona, to either Forest, Tedford, or Park Hill, not exceeding 24 miles, in lieu of the subsidy granted by chapter 4 of 1894;

419. To the St. John Valley and Rivière du Loup Railway Company, for a line of railway from Fredericton, in the county of York, New Brunswick, to Woodstock, in the county of Carleton, not exceeding 59 miles;

420. For a railway from Port Hawkesbury, on the Strait of Canso, Nova Scotia, to St. Peter's, not exceeding thirty miles;

421. For a railway from Windsor, Nova Scotia, to Truro, via the township of Clifton, not exceeding 58 miles, in lieu of the subsidy granted by chapter 4 of 1894;

422. For a railway from a point at or near Brookfield Station, Nova Scotia, on the Intercolonial Railway, to Eastville, not exceeding 25 miles, in lieu of the subsidy granted by chapter 4 of 1897;

423. For a railway from Cross Creek Station, on the Canada Eastern Railway, to Stanley Village, New Brunswick, not exceeding 6 miles;

424. For a railway from the village of St. Rémi to Stottville or some point on the Delaware and Hudson Railway (Grand Trunk) in the parish of St. Paul de l'Ile aux Noix, not exceeding 19 miles;

425. For a railway between Pontypool and Bobcaygeon, via Lindsay, Ontario, not exceeding 40 miles.

426. To the Pontiac Pacific Junction Railway Company, for a railway from Aylmer to Hull, Quebec, not exceeding 9 miles, in lieu of the subsidy granted by chapter 4 of 1897;

427. To the Portage du Fort and Bristol Branch Railway Company, for a branch line from a point on the Pontiac Pacific Junction Railway at or near the village of Quyon, towards the village of Portage du Fort, Quebec, not exceeding 15 miles, in lieu of the subsidy granted by chapter 4 of 1897;

428. To the Orford Mountain Railway Company, for a branch from their railway from a point between Lawrenceville and Eastman to Waterloo, not exceeding 13 miles;

429. To the Atlantic and Lake Superior Railway Company, for an extension of their railway from Caplin to Paspebiac, Quebec, not exceeding 30 miles;

430. To the United Counties Railway Company, for a railway from St. Robert Junction to Sorel, 6½ miles, (this subsidy to be payable only in the event of adequate running rights over the South-eastern Railway between the two points above mentioned not being granted to the first mentioned Company on terms to be approved by the Railway Committee of the Privy Council,) and from Mount Johnson to St. Grégoire Station, 1 mile, not exceeding 7½ miles.

431. For a railway from a point on the Central Railway in the county of Lunenburg, Nova Scotia, to the town of Liverpool, via the village of Caledonia, or to the village of Caledonia, via Liverpool, or for any part thereof, the whole distance not exceeding 62 miles;

432. For a railway from Indian Gardens, Queen's County, Nova Scotia, to Shelburne, in the said province, a distance of 35 miles;

433. The subsidy which the Ontario and Rainy River Railway Company is entitled to receive under chapter 4 of 1897, shall be $6,400 per mile for the 80 miles mentioned in the said Act; not exceeding in all $512,000.

434. To the Bay of Quinté Railway Company, for such extensions, branches or additions to their system as will enable the said Company to connect their lines of railway or connecting lines with iron or other mines or mineral or wood lands in the counties of Peterborough, Northumberland, Hastings, Lennox and Addington, Frontenac or Leeds, payable in instalments regulated by the length of each of the said extensions or branches or additions, as the case may be, in lieu of part of the balance remaining unpaid of the subsidy granted to the Kingston, Napance and Western Railway Company, by chapter 5 of 1892, but not exceeding $3,200 per mile for 10 miles, nor exceeding in the whole $32,000;

435. To the Quebec and Lake St. John Railway Company, for 12 miles of their railway from the end of their line at deep water on the Chicoutimi branch of their railway, to Ha Ha Bay, in the lieu of the subsidy for the 12 miles granted by chapter 4 of 1894;

436. For a line of railway from Hawkesbury, Ontario, to South Indian, not exceeding 35 miles;

437. For a railway from Sault Ste. Marie, Ontario, towards Michipicoten River and harbour and towards the main line of the Canadian Pacific Railway, not exceeding 40 miles;

438. For a branch line of railway from the main line of the Ottawa, Arnprior and Parry Sound Railway to the town of Parry Sound, Ontario, not exceeding 5 miles;

439. For a railway from the village of Haliburton, via the village of Whitney, towards the town of Mattawa, Ontario, not exceeding 20 miles;

440. For an extension of the Tilsonburg, Lake Erie and Pacific Railway, from Tilsonburg to Ingersoll or Woodstock, Ontario, not exceeding 28 miles;

441. To the South Shore Railway Company, from Sorel Junction along the South Shore to Lotbinière, Quebec, a distance not exceeding 82 miles;

442. To the Massawippi Valley Railway Company for an extension of their railway to the village of Stanstead Plain, Quebec, not exceeding 2½ miles;

443. For a railway from Port Hawkesbury on the Strait of Canso, to Caribou Cove, Nova Scotia, a distance of 10 miles;

444. For a railway from Fort Frances, Ontario, westerly to a point at or near the mouth of Rainy River, a distance not exceeding 70 miles;

445. To the Central Railway Company of New Brunswick, for an extension of their line of railway from Newcastle Coal Fields to Gibson, New Brunswick, not exceeding 30 miles;

446. To the Canadian Northern Railway Company, for a railway from a point on the present line of the Winnipeg Great Northern Railway north of Swan River to Prince Albert, North-west Territories, not exceeding 100 miles;

447. For a railway from some point near Antler Station to a point near Moose Mountain, Manitoba, not exceeding 50 miles;

448. For a railway from Sunnybrae to Country Harbour, and from a point at or near Country Harbour Cross Roads to Guysborough, Nova Scotia, to make up the deficiency in mileage between points mentioned and subsidized by chapter 4 of 1897, additional mileage not exceeding 15 miles;

449. For a railway from Port Clyde towards Lockeport, in the province of Nova Scotia, not exceeding 20 miles;

450. For a railway from a point on the Intercolonial Railway at or near Halifax towards the Central Railway in the county of Lunenburg, not exceeding 20 miles;

451. For a railway from Labelle, in the province of Quebec, in a north-westerly direction, to Nominingue, via Notre Dame de l'Annonciation, a distance not exceeding 22 miles;

452. For a railway from Owen Sound, in the province of Ontario, to Meaford, not exceeding 21 miles;

453. To the Ottawa and Gatineau Railway Company, for their line of railway in and through the city of Hull, Quebec, not exceeding 4 miles;

454. To the Western Alberta Railway Company, from a point on the United States boundary, west of Range 27, north-westerly towards Anthracite, in the district of Alberta, not exceeding 50 miles ;

455. To the Edmonton, Yukon and Pacific Railway Company, for a railway from the town of South Edmonton, North-west Territories, to North Edmonton, and thence westerly towards the Yellow Head Pass, a distance not exceeding 50 miles ;

456. To the Restigouche and Western Railway Company, in addition to the 20 miles subsidized by chapter 4 of 1897, and in continuation from the westerly end of the said 20 miles towards the St. John River, a further distance not exceeding 15 miles, and for the company's railway from a point on the St. John River, New Brunswick, at or near Grand Falls, or St. Leonard, or between Grand Falls and St. Leonard, and extending easterly towards Campbellton, such point to be approved by the Governor in Council, a distance of 12 miles ; in all not exceeding 27 miles ;

457. For a railway in extension of the St. Francis branch of the Temiscouata Railway to the mouth of the St. Francis River, a distance not exceeding 3 miles ;

458. To the Canada Eastern Railway Company, for a line of railway from Nelson, New Brunswick, to connect with the company's main line running into Chatham, to complete the connection from Nelson to such main line, not exceeding in the whole $2\frac{1}{4}$ miles ;

459 To the Bay of Quinté Railway Company, for an extension of their line in a westerly direction from a point at or near Richmond boundary road near Deseronto for a distance not exceeding 2 miles ; also for an extension of their line from its present terminus at Tweed in a northerly direction for a distance of 2 miles, and for an extension of their line from the end of the last 2 miles mentioned in a northerly direction for a distance not exceeding 3 miles—in all 7 miles ; subsidies payable on each of the sections mentioned as each of such sections is completed ;

460. To the Ontario, Belmont and Northern Railway Company, for an extension of their railway from its present terminus at Iron Mines in a north-westerly direction, a distance not exceeding 5 miles ; and also for an extension of the company's railway southerly, from the present southern terminus thereof to the Central Ontario Junction of the Canadian Pacific Railway, a distance not exceeding 2 miles ; but the last mentioned aid for the said 2 miles of railway shall not be granted in case the Railway Committee of the Privy Council finds that adequate running powers on fair terms can be secured to the company over that portion of the line of the Central Ontario Railway between the present southerly end of the Ontario, Belmont and Northern Railway and the Canadian Pacific Railway Company's line at Central Ontario Junction ; subsidies payable on each of the sections mentioned as each of such sections is completed ;

461. For a line of railway from a point on the Pembroke Southern Railway at or near Golden Lake, Ontario, towards a point on the Irondale, Bancroft and Ottawa Railway at or near Bancroft, not exceeding 20 miles ;

462. For a line of railway from Paspebiac, Quebec, to Gaspé in the said province, a distance not exceeding 82 miles ;

463. To the Lake Erie and Detroit River Railway Company, for a line of railway from Ridgetown, Ontario, to St. Thomas, in the said province, a distance not exceeding 44 miles ; this subsidy to be payable only in the event of adequate running rights over the Canada Southern Railway between the two points above mentioned not being granted to the first mentioned company on terms to be approved by the Railway Committee of the Privy Council ;

464. To the Kingston and Pembroke Railway Company, for the construction of branches from the Company's main line to the iron mine at Bluff Point and to the Martele mine in the county of Renfrew, not exceeding 5 miles ;

465. For a railway from the town of Parry Sound extending northerly towards Sudbury, a distance not exceeding 20 miles.

3. The Governor in Council may grant the subsidies hereinafter mentioned towards the construction of the railways also hereinafter mentioned, that is to say :—

466. The Ontario and Rainy River Railway Company, for a railway from a point 80 miles west of Stanley Station, on the Port Arthur, Duluth and Western Railway, to Fort Frances, for a distance of 140 miles, at $6,400 per mile, not exceeding in the whole	$ 896,000 00
467. To the Quebec Bridge Company, towards the construction of a railway bridge over the St. Lawrence River, at Chaudière Basin, near Quebec, one million dollars, 40 per cent of which amount may be paid on monthly progress estimates, approved by the Government engineers, of materials delivered and work done...	1,000,000 00
468. To the South Shore Railway Company, towards the restoration and renewal of the railway bridge over the Yamaska River at Yamaska, Quebec	50,000 00
469. Towards the construction of a bridge over the Richelieu River at Sorel, 15 per cent upon the amount expended thereon, not exceeding	35,000 00
470. Towards the construction of a bridge across the St. Francis River, 15 per cent of the amount expended thereon, not exceeding...	50,000 00
471. Towards the construction of a bridge across the Nicolet River, 15 per cent upon the amount expended thereon, not exceeding....	15,000 00
472. To the Midland Railway Company, Limited, towards the construction of a bridge across the Shubenacadie River, 15 per cent upon the amount expended thereon, not exceeding	33,750 00
473. To the Great Northern Railway Company, towards the construction of a bridge across the St. Maurice River, 15 per cent upon the amount expended thereon, not exceeding	16,425 00
474. Also towards the construction of a bridge across the Rivière du Loup, 15 per cent upon the amount expended thereon, not exceeding	15,000 00
475. Also towards the construction of a steel bridge and viaduct at the Maskinongé River, 15 per cent upon the amount expended thereon, not exceeding	15,000 00

4. The subsidies granted to the Ontario and Rainy River Railway Company, the Canadian Northern Railway Company and the Edmonton, Yukon and Pacific Railway Company are granted upon the condition, and, if received and paid under the authority of this Act to the above mentioned companies respectively, shall be received upon the condition, that the said companies shall not, nor shall any of them, at any time amalgamate with, or lease its line or lines to, any railway company other than those mentioned in this section, except as may be authorized by Parliament ; nor shall any of the said railways be leased to or operated by any other company ; nor shall any of the said companies make an agreement for a common fund or for pooling its receipts with any other railway company ; and any such lease, amalgamation or agreement shall be absolutely void, excepting in so far as such agreement may extend to traffic or running arrangements which have been approved by the Governor in Council.

5. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively ; all the lines for the construction of

which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, which agreement the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

6. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with those so subsidized reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the Governor in Council shall have absolute control at all times over the rates and tolls to be levied and imposed by any of the companies or upon any of the railways hereby subsidized.

7. The said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidized—except as to subsidies with respect to which it is hereinbefore otherwise provided.

8. Every company receiving a subsidy under this Act, its successors or assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, material and mails over the portion of its line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars, properly equipped, for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and in case of disagreement, then at such rates as are approved by the Governor in Council, and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of subsidy received by the company under this Act.

9. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the said railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

By the Act 63–64 Vic., chapter 8 (*Assented to July 18, 1900*).

1. In this Act, unless the context otherwise requires, the expression 'cost' means the actual, necessary and reasonable cost and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway nor the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his

opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile :—

476. For a railway from a point at or near the junction of the Irondale, Bancroft and Ottawa Railway and the Grand Trunk Railway to the village of Minden, in the county of Haliburton, Ontario, not exceeding 12 miles.

477. To the Strathroy and Western Counties Railway Company, for a railway commencing at a point at or near Caradoc station, on the Canadian Pacific Railway, and extending to the town of Strathroy, Ontario, not exceeding 7 miles.

478. For a line of railway from a point on the Pembroke Southern Railway at or near Golden Lake, towards a point on the Irondale, Bancroft and Ottawa Railway at or near Bancroft, Ontario, for the further extension of such railway westerly from the western terminus of the 20 miles subsidized by chapter 4 of 1897, for a distance not exceeding 20 miles.

479. To the Algoma Central Railway Company for 25 miles of its line of railway from its terminus at Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway, and for a further extension of this company's line of railway from Sault Ste. Marie towards Michipicoten River and Harbour, Ontario, towards the main line of the Canadian Pacific Railway, 25 miles in all, not exceeding 50 miles.

480. To the Central Ontario Railway Company, for a further extension of their railway from, at or near Bancroft to a point on the Canada Atlantic Railway between Whitney and Barry's Bay, Ontario, not exceeding 20 miles.

481. To the Manitoulin and North Shore Railway Company, for a line of railway between Little Current, on Manitoulin Island, and Sudbury, Ontario, on the Canadian Pacific Railway, the company undertaking to bridge between Little Current and the main land, the bridge to be so constructed and maintained as to afford suitable facilities, in the opinion of the Minister of Railways and Canals, for free vehicular and passenger traffic, the same as upon a public highway, the work to be begun and prosecuted from Little Current and Sudbury, one-half of the subsidy to be applicable, as earned, in respect of the work beginning at Little Current and carried on towards Sudbury, and one-half thereof to be applicable, as earned, in respect of the work beginning at Sudbury and carried on towards Little Current, the course of the line of railway to cross the Sault Ste. Marie branch of the Canadian Pacific Railway, not exceeding 66 miles.

482. For a railway from Bracebridge, in Muskoka, to a point at or near Baysville, Ontario, not exceeding 15 miles.

483. For a railway beginning at a point northerly 20 miles from Parry Sound, and extending from that point to the French River, Ontario, not exceeding 35 miles.

484. For a railway from a point 20 miles north-easterly from the village of Haliburton, via the village of Whitney, towards the village of Mattawa, Ontario, not exceeding 40 miles.

485. To the Kingston and Pembroke Railway Company, for a branch line of railway to iron mines in Bedford township, Ontario, not exceeding 12 miles.

486. To the Thousand Islands Railway Company for an extension of their railway from the present northerly terminus to a point easterly thereof, not exceeding 2 miles ;

And also for an extension from a point on the railway to connect their railway with the Brockville, Westport and Sault Ste. Marie Railway, the Bay of Quinté Railway, the Kingston, Smith's Falls and Ottawa Railway, or the waters of the Rideau Canal, the balance remaining of the subsidy granted by chapter 5 of 1892, not exceeding 9½ miles.

487. For a railway from Dyment, on the Canadian Pacific Railway, to the New Klondike mining district, Ontario, not exceeding 7 miles.

488. To the Schomberg and Aurora Railway Company, for an extension of their line from its easterly terminus to a point at or near Bond's Lake, Ontario, not exceeding 4 miles.

489. To the Nipissing and James Bay Railway Company, for a railway from, at or near North Bay station, on the Canadian Pacific Railway, towards James Bay, or Lake Tamagaming, Ontario, not exceeding 20 miles.

490. In aid of the Ottawa and New York Railway Company's bridge over the St. Lawrence River, and for the Canadian portion of such bridge, a sum not exceeding $90,000.

491. To the Grand Trunk Railway Company of Canada, towards the cost of the rebuilding and enlargement of the Victoria Bridge over the St. Lawrence River, Quebec, in addition to the amount received by the company on account of the subsidy granted by chapter 4 of 1897, viz: $270,000, to make up the grant in aid of the undertaking to $500,000, upon condition that the tolls upon the bridge for passenger and vehicular traffic shall be subject to the approval of the Governor in Council, a sum not exceeding $230,000.

492. For a railway and traffic bridge over the Ottawa River at Nepean Point, between the city of Ottawa, Ontario, and the city of Hull, Quebec, upon condition that the bridge be so constructed as to provide suitable facilities, to the satisfaction of the Minister of Railways and Canals, for free vehicular and foot passenger traffic, the same as upon a public highway, in addition to the $112,500 already granted,—and, notwithstanding anything in the said Act, the subsidy hereby granted, together with the grant of $112,500 under chapter 4 of 1897, shall be paid upon the completion of the bridge and its approaches, upon the Chief Engineer's report of such completion, and the recommendation of the Minister,—a sum not exceeding $100,000.

493. To the Canadian Northern Railway Company, in further extension of their railway north of Swan River towards Prince Albert, North-west Territories, in addition to the grant by chapter 7 of 1899, a further mileage not exceeding 100 miles.

494. For a railway from the westerly end of the Waskada branch of the Canadian Pacific Railway, Manitoba, further westward, not exceeding 20 miles.

495. For a railway from a point on the Alberta Railway and Coal Company's Railway towards Cardston, Alberta, N.W.T., for 30 miles of railway at $2,500 per mile.

496. To the Kaslo and Lardo-Duncan Railway Company, for a railway from Duncan Lake towards Lardo or Arrow Lake, British Columbia, or from Lardo to Arrow Lake, not exceeding 30 miles.

497. To the Restigouche and Western Railway Company, for the company's railway, in addition to the 15 miles subsidized by chapter 7 of 1899, on the easterly section of the line, and in continuation from the westerly end of the said 15 miles, a further distance of 15 miles towards the St. John River; and for the said railway, in addition to the 12 miles subsidized by the said chapter on the westerly section of the said line, a further distance from the easterly end thereof of 15 miles, towards Campbellton, N.B., not exceeding 30 miles.

498. For a line of railway from St. Charles Junction on the Intercolonial Railway towards the St. Francis branch of the Temiscouata Railway, Quebec, not exceeding 45 miles, and from the mouth of the St. Francis River, N.B., westerly towards St. Charles Junction, 15 miles, in all not exceeding 60 miles.

499. For a line of railway from Bristol, in the county of Carleton, New Brunswick, on the Canadian Pacific Railway, easterly, a distance not exceeding 17 miles.

500. For a line of railway from Shediac, county of Westmorland, New Brunswick, to Shemogue, and towards Cape Tormentine, in the said county, a distance not exceeding 38 miles.

501. For a railway from Lockeport, Nova Scotia, to Sable River, or other convenient point of railway connection, not exceeding 20 miles.

502. To the Inverness and Richmond Railway Company, for a railway in extension of the company's line northward from Broad Cove to Cheticamp, C.B., Nova Scotia, not exceeding 40 miles.

503. For a railway from Bridgetown to Victoria Beach, Nova Scotia, not exceeding 30 miles.

504. For a railway from a point on the Intercolonial Railway, Pictou branch, to Kempt Town, county of Colchester, Nova Scotia, not exceeding 4½ miles.

505. For a railway from Brazil Lake, on the Dominion Atlantic Railway, to Kemptville, Nova Scotia, not exceeding 11 miles.

506. To the Montfort and Gatineau Colonization Railway Company, to enable it to extend its railway from Arundel to a point in the municipality of the united townships of Preston and Hartwell, province of Quebec, not exceeding 30 miles.

507. To the Chateauguay and Northern Railway Company, for a railway from a point in Hochelaga ward, Montreal, to a point on the Great Northern Railway, in or near the town of Joliette, passing near the town of L'Assomption, Quebec, together with a spur into the said town, not exceeding 42 miles.

508. To the Chateauguay and Northern Railway Company, for a single-track standard railway bridge, with two roadways 10 feet wide, for free vehicular and foot passenger traffic, the same as upon a public highway, from Bout L'Isle to Charlemange, at the junction of the Ottawa and St. Lawrence rivers, $150,000.

509. To the Chateauguay and Northern Railway Company, towards the construction of a bridge across the Lac Ouareau River, $15,000.

510. To the Arthabaska Railway Company, for a railway from Victoriaville to West Chester, province of Quebec, a distance not exceeding 12 miles.

511. To the Great Northern Railway Company, for a branch line from the town or from near the town of Joliette towards Ste. Emélie, touching the parishes of Ste. Beatrix and Ste. Jean de Matha, not exceeding 20 miles.

512. For a railway from Farnham, province of Quebec, to Frelighsburg and the International Boundary Line, not exceeding 21 miles.

513. Towards the construction of a railway bridge over the St. Francis River, in lieu of the grant under chapter 7 of 1899, at St. François du Lac, on the condition that the bridge, with approaches, be built so as to allow the municipalities to make use thereof, to establish and maintain a suitable roadway for the free passage of foot passengers, vehicles and animals, to be approved by the Minister of Railways and Canals, $50,000.

514. Towards the construction of a railway bridge over the Nicolet River at Nicolet, in lieu of the grant under chapter 7 of 1899, $15,000.

515. For a line of railway from Halifax towards a point on the Central Railway of Nova Scotia, in the county of Lunenburg, in addition to and in extension of the 20 miles subsidized by chapter 7 of 1899, not exceeding 20 miles.

3. The subsidies hereby granted and any subsidies heretofore granted under any Act of the Parliament of Canada, still in force, but not fully paid, towards the construction of any railway or bridge, shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless in this Act otherwise expressly provided, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows :

(*a*) upon the completion of the work subsidized ; or

(*b*.) by instalments on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken ; or

(*c.*) upon progress estimates on the certificate of the Chief Engineer of Railways and Canals, that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than sixty thousand dollars ; or

(*d.*) with respect to (*b*) and (*c*), part one way, part the other.

4. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as are approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively ; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the government, which agreement the government is hereby empowered to make ; the location also of every such line of railway shall be subject to the approval of the Governor in Council.

5. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with those so subsidized reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways ; and the Governor in Council shall have absolute control at all times over the rates and tolls to be levied and imposed by any of the companies or upon any of the railways hereby subsidized.

6. The Governor in Council may make it a condition of the subsidies hereby granted, or of any heretofore granted by any Act of Parliament as to which a contract has not yet been entered into between Her Majesty and the company for the construction of the railway, that the company shall lay its road with new steel rails made in Canada, if such rails are procurable in Canada of suitable quality upon terms as favourable as other rails can be obtained upon, of which the Minister of Railways and Canals shall be the judge.

7. Every company receiving a subsidy under this Act, its successors or assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the government of Canada transportation for men, supplies, material and mails over the portion of its line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars, properly equipped, for such mail service ; and such transportation and service shall be performed at such rates as are agreed upon between the minister of the department of the government for which such service is being performed and the company performing it, and in case of disagreement then at such rates as are approved by the Governor in Council ; and in or towards payment for such charges the government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of subsidy received by the company under this Act.

8. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the said railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

9. Paragraph 20 of section 2 of chapter 7 of the statutes of 1899 is amended by inserting after the word 'railway,' in the third line, the words 'or to connect the said lines.'

10. The subsidy provided for by chapter 7 of the statutes of 1899 towards the construction of a railway bridge over the St. Lawrence River at Chaudière Basin, near Quebec, shall be deemed to be applicable, as to one-third thereof, to the substructure and approaches, and as to two-thirds thereof to the superstructure, and the said subsidy may be paid upon that basis by authority of the Governor in Council, upon progress estimates to be furnished from time to time by the Chief Engineer of Government Railways and Canals, so that one-third of such subsidy, and no more, may be paid in respect of and upon completion of the masonry of the substructure and approaches of the said bridge, one-third, and no more, upon the work and material of one-half of the superstructure being done and supplied, in respect of such work and material, and the remaing one-third upon the completion of the whole work.

By the Act 1st Edward VII., chapter 7 (*Assented to May 23, 1901.*)

1. In this Act, unless the context otherwise requires, the expression 'cost' means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile;—

516. For a line of railway from a point on the Intercolonial Railway at or near New Glasgow to Country Harbour, Nova Scotia, and from a point at or near Country Harbour Cross Roads to Guysborough, in lieu of the subsidies granted by 1897, cap. 4, and 1899, cap. 7, sec. 2, paragraph 34, not exceeding 80 miles.

517. To the Quebec and New Brunswick Railway Company, for a line of railway from a point at or near St. Charles or at or near Chaudière Junction or a point on the Quebec Central Railway, near St. Anselme, Quebec, towards the present terminus of the St. Francis Branch of the Témiscouata Railway, New Brunswick, not exceeding 45 miles, and for a line of railway from the mouth of the St. Francis River, New Brunswick, westerly towards Chaudière Junction, not exceeding 15 miles, in lieu of the subsidy granted by 1900, cap, 8, sec. 2, paragraph 23; also for a line of railway in extension of the St. Francis Branch of the Témiscouata Railway to the mouth of the St. Francis River, New Brunswick, in lieu of the subsidy granted by 1899, cap. 7, sec. 2, paragraph 43, not exceeding 3 miles; in all not exceeding 63 miles.

518. To the Montreal and Province Line Railway Company, for a line of railway from Farnham, Quebec, to Frelighsburg, in lieu of the subsidy granted by 1900, cap. 8, sec. 2, paragraph 37, not exceeding 19 miles.

519. For a line of railway from a point on the Intercolonial Railway at or near Windsor Junction to Upper Musquodoboit, in lieu of 1897, cap. 4, sec. 2, paragraph 23, not exceeding 40 miles.

520. For a line of railway from Pubnico, Nova Scotia, to Port Clyde or Clyde River, in lieu of the unexpended balance of subsidy granted by 1897, cap. 4, sec. 2, paragraph 29, not exceeding 31 miles.

521. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from the western terminus of the 20 miles subsidized by 1899, cap. 7, sec. 2, paragraph 47, westerly towards Bancroft, not exceeding 20 miles, in lieu of the subsidy granted by 1900, cap. 8, sec., 2 paragraph 3; also from the terminus of previously subsidized lines at a point about 40 miles west of Golden Lake, westerly to Bancroft, not exceeding 11 miles; in all not exceeding 31 miles.

522. For a line of railway from Chipman Station, New Brunswick, to Gibson, in lieu of the subsidies granted by 1897, cap. 4, and 1899, cap. 7, sec. 2, paragraph 31, not exceeding 45 miles.

523. To the Inverness and Richmond Railway Company, for a line of railway from a point at or near Point Tupper on the Intercolonial Railway, to Broad Cove and Cheticamp, Nova Scotia, in lieu of the subsidies granted by 1897, cap. 4, 1899, cap. 7, sec. 2, paragraph 29, and 1900, cap. 8, sec. 2, paragraph 27, not exceeding 98 miles.

524. For a line of railway from Caplin to Paspebiac, Quebec, in lieu of the subsidy granted by 1899, cap. 7, sec. 2, paragraph 15, the subsidy contract to be entered into with the trustees or receivers under mortgage from the Atlantic and Lake Superior Railway Company, and to contain the conditions that the subsidy when earned shall be paid in the following manner:—

1st. To the Hamilton Bridge Works Company in payment for bridge superstructures on the said section of railway, when furnished and erected by that company, not to exceed $35,000;

2nd. For the completion of the road-bed and works incidental thereto;

3rd. Towards payment of overdue balances, pro rata, in settlement of claims for labour, boarding-house claims, and material and supplies furnished in connection with the construction of the said section of railway; in all not exceeding 30 miles.

525. To the Schomberg and Aurora Railway Company, for a line of railway from a point on the Grand Trunk Railway between King and Newmarket, Ontario, to Schomberg, in lieu of the subsidy granted by 1897, cap. 4, not exceeding 15 miles.

526. To the Ottawa and Gatineau Railway Company, for a line of railway from the end of the 62nd mile subsidized, towards Désert, in lieu of the subsidy granted by 1897, cap. 4, sec. 2, paragraph 5, not exceeding 20 miles.

527. To the Restigouche and Western Railway Company, for its line of railway from Campbellton on the Intercolonial Railway, New Brunswick, towards Grand Falls, in lieu of the subsidy granted by 1897, cap. 4, sec. 2, paragraph 10, not exceeding 20 miles.

528. To the Pontiac Pacific Junction Railway Company, for 36 miles of its railway from a point at or near Shawville, crossing the Ottawa River via Calumet Island to Pembroke, including the bridging of both channels of the Ottawa River at Calumet Island, 14 miles of which shall be in lieu of the unexpended balance of subsidy granted by 1897, cap. 4, sec. 3, paragraph 2, not exceeding $115,200.

529. To the Manitoulin and North Shore Railway Company, for its line of railway, from a point on its line of railway between Sudbury and Little Current to its junction with the line of the Algoma Central and Hudson Bay Railway, at or

near Goulais River, in addition to and in further extension of its railway subsidized by 1900, cap. 8, sec. 2, paragraph 6, an additional mileage not exceeding 130 miles.

530. For a line of railway from Grandique Ferry, Nova Scotia, to Arichat, not exceeding 8 miles.

531. To the Central Ontario Railway Company, for a further extension of its line of railway, subsidized by 1900, cap. 8, sec. 2, paragraph 5, northward, to a junction with the Canada Atlantic Railway, at or near Whitney, Ontario, not exceeding 20 miles.

532. To the Kingston and Pembroke Railway Company, for a line of railway from a point at or near Sharbot Lake, Ontario, via Lanark, to Carelton Place, not exceeding 41 miles.

533. To the Norwood and Apsley Railway Company, for a line of railway from Norwood, Ontario, to the village of Apsley, not exceeding 30 miles.

534. For a line of railway from a point on the Dominion Atlantic Railway at or near Wolfville, Nova Scotia, to the Government pier on the Basin of Minas, not exceeding one mile.

535. To the Algoma Central and Hudson Bay Railway Company, for a line of railway from Sault Ste Marie to a point on the Canadian Pacific Railway at or near White River, in the district of Algoma, in extension of the subsidy granted to the Algoma Central Railway by 1899, cap. 8, sec. 2, paragraph 23, and by 1900, cap. 8, sec. 2, paragraph 4, a further and additional mileage not exceeding 135 miles.

536. For a line of railway from Bridgetown, Nova Scotia, to Middleton, in extension of the line subsidized by 1900, cap. 8, sec. 2, paragraph 28, not exceeding 11 miles.

537. For a line of railway from a point on the Grand Trunk Railway at or near Burk's Falls, Ontario, to the Maganetawan River, not exceeding two miles.

538. For a line of railway between Halifax and the Central Railway, Nova Scotia, from the end of the 40th mile from Halifax, subsidized by 1900, cap. 8, sec. 2, paragraph 40, to a junction with the Central Railway, Nova Scotia, not exceeding 30 miles.

539. For a line of railway from a point on the Algoma branch of the Canadian Pacific Railway at or near Bruce Lake Station, northerly to a point at or near Rock Lake, in the district of Algoma, not exceeding 9 miles.

540. For a line of railway from Roberval, Quebec, westward towards James Bay, not exceeding 60 miles.

541. For a line of railway from a point upon the Stonewall branch or the Selkirk branch of the Canadian Pacific Railway to Icelandic River by way of Gimli, not exceeding 35 miles.

542. To the Restigouche and Western Railway Company, for an extension of its line of railway from the 50th mile from Campbellton already subsidized, westward, to effect a junction with its line of railway subsidized 27 miles east from the St. John River, not exceeding 33 miles.

543. For a line of railway from Duncan Lake towards Lardo or Arrow Lake, British Columbia, or from Lardo to Arrow Lake, in lieu of the subsidy granted by 1900, cap. 8, sec. 2, paragraph 21, not exceeding 30 miles.

3. The Governor in Council may grant to the Ottawa and Gatineau Railway, for its unearned balance of subsidy upon the 62 miles of its line of railway from Hull towards Désert, granted by 1897, chap. 4, sec. 3, paragraph 3, a sum not exceeding $35,872.

4. The subsidies hereby authorized, and any subsidies heretofore authorized under any Act of Parliament of Canada still in force but not fully paid, towards the construction of any railway or bridge, shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the

Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

(*a.*) upon the completion of the work subsidized; or

(*b.*) by instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or

(*c.*) upon progress estimates on the certificate of the Chief Engineer of Government Railways, that, in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than sixty thousand dollars; or

(*d.*) with respect to (*b.*) and (*c.*), part one way, part the other.

5. The subsidy of 66 miles granted to the Manitoulin and North Shore Railway Company for a line of railway between Little Current, on Manitoulin Island, and Sudbury, Ontario, by paragraph 6 of section 2 of chapter 8 of the statutes of 1900, may be contracted for with the company and paid, and the work may be begun and prosecuted in two sections, the first beginning at or near Victoria Mines, in the township of Denison, and extending to Sudbury, and thence north-easterly towards Lake Wahnapitae, not exceeding 33 miles; the second section beginning at Little Current and extending to and connecting with the Canadian Pacific Railway at or near Stanley, in the township of Baldwin, on the Canadian Pacific Railway, not exceeding 31 miles; subject, however, to the company carrying out the undertakings contained in paragraph 6 of section 2 of chapter 8 of the statutes of 1900.

6. The subsidies hereinbefore authorized to be granted to companies named, shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1901, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed upon a location, and according to descriptions, conditions, and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make.

7. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements, and other rights, as will afford to all railways connecting with those so subsidized, reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the Governor in Council shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways hereby subsidized.

8. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials aud mails over the portion of the line in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Governor in Council; and in or towards payment for such charges the Government of Canada shall

be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

9. As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

10. The Governor in Council may make it a condition of the grant of the subsidies herein provided, or any heretofore authorized by any Act of Parliament as to which a contract has not yet been entered into with the company for the construction of the railway, that the company shall lay its road with new steel rails, made in Canada, if they are procurable in Canada of suitable quality, upon terms as favourable as other rails can be obtained, of which the Minister of Railways and Canals shall be the judge.

By the Act 3rd Edward VII., chap. 57 (assented to 24th October, 1903.)

1. In this Act, unless the context otherwise requires, the expression 'cost' means the actual, necessary and reasonable cost and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile :—

544. To the Tilsonburg, Lake Erie and Pacific Railway Company, for a line of railway from the present terminus at Ingersoll to Woodstock, not exceeding 9 miles, in lieu of the subsidy granted by item 26 of section 2 of chapter 7 of 1899.

545. To the Lindsay, Bobcaygeon and Pontypool Railway Company, for a line of railway from Burketon to Bobcaygeon, not exceeding 40 miles, in lieu of the subsidy granted by item 11 of section 2 of chapter 7 of 1899.

546. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from Golden Lake to Bancroft, not exceeding 51 miles, in lieu of the subsidy granted by item 6 of section 2 of chapter 7, 1901.

547. To the Central Ontario Railway, for a further extension of its railway from a point at or near Bancroft to a point on the Canada Atlantic Railway at or near Whitney, not exceeding 40 miles, in lieu of the subsidies granted by item 5 of section 2 of chapter 8 of 1900, and item 16 of section 2 of chapter 7 of 1901, respectively.

548. To the Strathroy and Western Counties Railway Company, for a line of railway from a point at Lambeth to Strathroy, via the villages of Delaware, Mount Brydges and Caradoc Station on the Canadian Pacific Railway, and from Strathroy northerly to Forest, Thedford or Parkhill, not exceeding in all 31 miles, in lieu of subsidies granted by item 4 of section 2 of chapter 7, 1899, and item 2 of section 2 of chapter 8 of 1900, respectively.

549. To the Montfort and Gatineau Colonization Railway Company, to extend its railway from Arundel to a point in the municipality of the united townships of Preston and Hartwell, not exceeding 30 miles, in lieu of the subsidy granted by item 31 of section 2 of chapter 8 of 1900.

550. For a line of railway from Jonquières to La Baie des Ha Ha, not exceeding 20 miles, in lieu of the subsidy of 12 miles granted by item 21 of section 2 of chapter 7 of 1899.

551. For a line of railway from Lime Ridge northerly through the county of Wolfe in the county of Megantic, not exceeding 50 miles, being a revote of the subsidy granted by chapter 4 of 1894.

552. For a line of railway from Joliette to or near Lake Manuan, a distance not exceeding 60 miles, being a revote and in lieu of subsidies granted by chapter 4 of 1897 and chapter 8 of 1900.

553. For a line of railway from St. Eustache to St. Placide in the county of Two Mountains, not to exceed 18 miles; from St. Eustache to Sault au Recollet, 12 miles; and from St. Placide to St. Andrews, 8 miles—not exceeding in all 38 miles; being a revote of subsidies granted by chapter 24 of 1887 and chapter 5 of 1892, respectively.

554. For a line of railway from Roberval westward towards James Bay, not exceeding 60 miles, in lieu of the subsidy granted by item 25 of section 2 of chapter 7 of 1901.

556. For a line of railway from Yamaska to Lotbinière, a distance not exceeding 70 miles, in lieu of the subsidy granted by item 27 of section 2 of chapter 7 of 1899.

557. To the Ottawa, Northern and Western Railway Company, for that portion of its line from a point at the east end of the Hull station yard of the Canadian Pacific Railway to a point of junction with the Interprovincial Bridge approach in the city of Hull, not exceeding one mile; and for a line of railway to the boundary line of the city of Hull from a point on the Ottawa and Gatineau Railway, now the Ottawa, Northern and Western Railway, not exceeding one-quarter of a mile; in lieu of any balance of mileage subsidized by items 12 and 39 respectively of section 2 of chapter 7 of 1899.

558. To the International Railway Company of New Brunswick (formerly the Restigouche and Western Railway Company), for a line of railway from the western end of the ten miles of its railway, as already constructed from Campbellton towards a point on the St. John River between Grand Falls and Edmundston, not exceeding 67 miles, being a revote, and in lieu of subsidies granted by chapter 4 of 1897, item 42 of section 2 of chapter 7 of 1899, and item 22 of section 2 of chapter 8 of 1900.

559. For a line of railway from Woodstock to the International Boundary, not exceeding 26 miles, being a revote of the subsidy granted by chapter 4 of 1894.

560. To the St. John Valley Railway Company, for a line of railway from a point on the Canadian Pacific Railway at or near Welsford or Westfield, or between the said two points, to Gagetown, not exceeding 30 miles, being a revote of the subsidy granted by chapter 4 of 1897.

561. To the Shediac and Coast Railway Company, for a line of railway from Shediac to Shemogue and towards Cape Tormentine, in Westmoreland County, not exceeding 38 miles, in lieu of the subsidy granted by item 25 of section 2 of chapter 8 of 1900.

562. To the Mabou and Gulf Railway Company, Limited, for a line of railway from Mabou Coal Mines to a point at or near Glendyer, thence to Orangedale on the Intercolonial Railway, not exceeding 34 miles, a revote of the subsidy granted by chapter 4 of 1894, and in substitution of the 25 miles subsidized thereby from Orangedale to Broad Cove.

563. To the Nova Scotia Eastern Railway Company, Limited, for a line of railway from New Glasgow to Cross Roads, Country Harbour, thence to the town of Guysborough, and thence to the Strait of Canso; with a branch from Cross Roads, Country Harbour, aforesaid, down the Country Harbour River to the Deep Waters thereof, not exceeding 116 miles; in lieu of subsidies for 40 and 80 miles granted by items 4 and 1, respectively, of section 2 of chapter 7 of 1901.

564. For a line of railway from Debert Station on the Intercolonial Railway to Debert Coal Mine, not exceeding 4½ miles, in lieu of the subsidy granted by item 29 of section 2 of chapter 8 of 1900.

565. For a line of railway from a point on the Joggins Railway near River Hebert Railway Bridge to the village of Minudie, not exceeding 6 miles, being a revote and in substitution of subsidy granted by chapter 4 of 1894.

566. To the Middleton and Victoria Beach Railway Company, Limited, for a line of railway from Victoria Beach to Middleton, not exceeding 41 miles, in lieu of subsidies granted by item 28 of section 2 of chapter 8 of 1900, and by item 21 of section 2 of chapter 7 of 1901.

567. To the Halifax and South-western Railway Company, for the following lines of railway:—

(*a.*) A line of railway from a point at or near Halifax to a point on the Central Railway at or near Mahone Bay, not exceeding 68 miles.

(*b.*) A line of railway from a point on the Central Railway at or near Bridgewater towards Barrington Passage, not exceeding 77 miles.

(*c.*) A line of railway from a point at or near New Germany on the Central Railway to a point at or near Caledonia, not exceeding 22 miles.

(*d.*) A line of railway from a point at or near Caledonia to Liverpool, not exceeding 29 miles.

The subsidies to the said lines of railway being granted in lieu of subsidies granted by items 17, 18, 35 and 36 of section 2 of chapter 7, 1899 by items 26 and 40 of section 2 of chapter 8 of 1900, and items 5 and 23 of section 2 of chapter 7 of 1901, respectivley.

568. To the Inverness Railway and Coal Company, formerly the Inverness and Richmond Railway Company, Limited, for 8 miles of railway between Point Tupper and Broad Cove; and for a line of railway not exceeding 37 miles, from Cheticamp to a point on the line already built between Broad Cove and Point Tupper, being a revote and in substitution of the subsidy granted by chapter 4 of 1897.

569. For a line of railway from a point at or near Wolfville on the Dominion Atlantic Railway to the Government pier on the Basin of Minas, not exceeding one mile, in lieu of the subsidy granted by item 19 of section 2 of chapter 7 of 1901.

570. To the Nicola, Kamloops and Similkameen Coal and Railway Company, for a line of railway from a point at or near Spence's Bridge on the Canadian Pacific Railway to Nicola Lake, not exceeding 45 miles, being a revote of subsidies granted by chapter 5 of 1892 and chapter 4 of 1894.

571. For a line of railway from Winnipeg Beach or Teulon to a point on Icelandic River, by way of Gimli, not exceeding 35 miles, in lieu of the subsidy granted by item 26 of section 2 of chapter 7 of 1901.

572. To the Edmonton, Yukon and Pacific Railway Company, for a line of railway from the town of Strathcona to Edmonton, and thence westerly towards the Yellow Head Pass, a distance not exceeding 50 miles, in lieu of the subsidy granted by item 41 of section 2 of chapter 7 of 1899.

573. To the St. John Valley and Rivière du Loup Railway Company, for a line of railway from Fredericton to Woodstock, not exceeding 59 miles, in lieu of the subsidy granted by item 5 of section 2 of chapter 7 of 1899.

574. For a line of railway from Hawkesbury, Ontario, to South Indian, not exceeding 35 miles, in lieu of the subsidy granted by item 22 of section 2 of chapter 7 of 1899.

575. To the Tilsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Woodstock northerly to a point on the Grand Trunk Railway at Berlin, or from Ingersoll to Stratford, or to any point on the Grand Trunk Railway between these places, not exceeding 35 miles, being in addition to and continuation of the 9 miles mentioned in item 1 of this section (544).

576. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the present terminus of its railway, near Baptiste, easterly to a point at or near Renfrew, not exceeding 75 miles.

577. To the Nepigon Railway Company, for a line of railway from Lake Superior to Lake Nepigon, and from a point on the north shore of Lake Nepigon northerly, not exceeding 80 miles.

578. To the Manitoulin and North Shore Railway Company, for a line of railway from Little Current on its present line, to Sudbury, and thence towards the main line of the Canadian Pacific Railway Company, not exceeding 30 miles, in lieu of the subsidy for 21 miles granted by item 38 of section 2 of chapter 7 of 1899.

579. To the Thunder Bay, Nepigon and St. Joe Railway Company, for a line of railway from Port Arthur north-easterly, not exceeding 50 miles.

580. To the Timagami Railway Company, for a line of railway from a point at or near Sturgeon Falls in a north-westerly direction to a point on the westerly shore of Lake Timagami in the district of Nipissing, not exceeding 50 miles.

581. To the Bay of Quinté Railway Company, for further extension of its line of railway, from the northern terminus thereof, commencing from a point at or near Actinolite, thence in a north-westerly direction, via the villages of Queensboro' and Bannockburn, to a point in the township of Marmora or Lake in Hastings County, not exceeding 20 miles in all.

582. To the Bruce Mines and Algoma Railway Company, for 21 miles from the end of its line, as subsidized by chapter 7 of 1901, northward, not exceeding 21 miles.

583. To the James Bay Railway Company, for a line of railway from Toronto, via the east side of Lake Simcoe, to a point at, near, or beyond Sudbury, through Parry Sound, not exceeding 265 miles, in lieu of two subsidies granted by chapter 8 of 1900, for 35 and 20 miles, respectively, from Parry Sound towards James Bay.

584. To the Quebec and Lake St. John Railway Company, for one mile of railway from Roberval to the Government wharf at Lake St. John.

585. To the Montfort and Gatineau Colonization Railway Company, for the extension of its line of railway from Morin Flats to St, Jerome. to connect with the Great Northern Railway, not exceeding 22 miles.

586. To the Interprovincial and James Bay Railway Company, for a line of railway from Lake Timiskaming at the present terminus of the Canadian Pacific Railway line, in a northerly direction, not to exceed 50 miles.

587. For a line of railway from Waltham Station to Ferguson Point, in the county of Pontiac, not exceeding 20 miles.

588. For a line of railway from Lake Nominingue to Le Lièvre, not exceeding 35 miles.

589. For a line of railway in extension of the line from Lime Ridge into the county of Megantic to the bridge over the St. Lawrence at or near Quebec, not exceeding 30 miles.

590. To the Quebec Central Railway Company, for an extension of its line of railway from St. François to St. George, not exceeding 9 miles; also for a railway from Scott Junction to the Quebec bridge, not exceeding 22 miles.

591. For a line of railway from the station of Lac Bouchette on the Quebec and Lake St. John Railway to St. André, not exceeding 13 miles.

592. For a line of railway from Quebec towards Seven Islands, including branches to Murray Bay and Baie St. Paul, not exceeding 200 miles.

593. For a branch line from a point at or near the intersection of the Canadian Pacific Railway and the Great Northern Railway between St. Philippe d'Argenteuil and Lachute, thence in a northerly direction, passing through the village of Brownsburg, not exceeding 3 miles.

594. To the Orford Mountain Railway Company, for a line of railway from a point on its main line between Lawreneeville and Eastman to Lake Bonella, 5 miles; from Kingsbury to Windsor Mills, 10 miles; and from Eastman to the town line between the township of Bolton, east part, and the township of Potton, 12 miles—not exceeding in the whole 27 miles.

595. To the Atlantic, Quebec and Western Railway Company, for a line of railway from Gaspé to a point at or near Causapscal on the Intercolonial Railway, and from that point to Edmundston, not exceeding 260 miles; and for a line of railway from Paspebiac to Gaspé as near the shore as practicable, not exceeding 102 miles.

596. For a line of railway, in addition to and in extension of the line mentioned in item 11 (554) of this section, from Roberval towards James Bay, not exceeding 40 miles.

597. For a branch line from a point near the bridge at Trois Pistoles River on the Intercolonial Railway in a south-easterly direction to Mackenzie and Renouf Falls, on the Trois Pistoles River, not exceeding 2½ miles.

598. To the Matane and Gaspé Railway Company, for a line of railway from a point at or near St. Octave on the Intercolonial Railway to Matane, not exceeding 30 miles.

599. To the Chateauguay and Northern Railway Company, for a line of railway from a point on its main line at or near L'Epiphanie, passing by way of the parish of St. Jacques de l'Achigan to the village of Rawdon, not exceeding 16 miles.

600. For a line of railway from the line of the Montreal and Atlantic Railway Company at St. Guillaume to the River Yamaska to join with the South Shore Railway, a distance not exceeding 12 miles.

601. For aline of railway from La Tuque on the St. Mauriee River to a point on the Lake St. John Railway near the River Jeannotte, not exceeding 35 miles.

602. To the Montreal Northern Railway Company, for a line of railway from a point at or near Ste. Agathe des Monts station towards the township of Howard, in the county of Argenteuil, passing near Lakes St. Joseph and Ste. Marie, in a southerly direction, a distance not exceeding 15 miles.

603. To the Internationial Railway Company of New Brunswick, for a line of railway, in addition to and in extension of the line of 67 miles mentioned in item 14 of this section, to a point on the St. John River between Grand Falls and Edmundston, not exceeding 33 miles.

604. To the Beersville Coal and Railway Company, for a line of railway from Adamsville on the Intercolonial Railway to a point at or near Brown's Landing or Beersville, not exceeding 7 miles.

605. To the York and Carleton Railway Company, for a line of railway from its present terminus westerly, not exceeding 5 miles.

606. To the Mabou and Gulf Railway Company, Limited, for a line of railway from a point on the Intercolonial Railway at or near Mines Road Station to the wharf at Caribou Cove, not exceeding 4 miles, being in addition to subsidy mentioned in item 18 (562) of this section.

607. To the Nova Scotia Eastern Railway Company, Limited, for a line of railway from Dartmouth through the Musquodoboit Valley to a point at or near Melrose to connect there with the railway mentioned in item 19 (563) of this section, not exceeding 120 miles.

608. To the Midland Railway Company, Limited, for a line of railway from Truro northerly towards Brule, not exceeding 34 miles.

609. For a line of railway from St. Peters to Louisburg, not exceeding 50 miles.

610. To the Koetenay Central Railway Company, for a line of railway from Golden to the International Boundary Line, via Windermere and Fort Steele, and crossing the Crow's Nest Railway at or near Elko, not exceeding 186 miles.

611. To the Kettle River Valley Railway Company, for a line of railway from Grand Forks to a point 50 miles up the North Fork and West Fork of the North Fork of Kettle River, not exceeding 50 miles.

612. For a line of railway from Wellington to Union Bay, not exceeding 55 miles.

613. For a line of railway from Midway to Vernon, not exceeding 150 miles.

614. To the St. Mary's River Railway Company, for a line of railway from Spring Coulee, crossing St. Mary's River to Cardston, 16 miles, and from a point on this line to or near the intake of the irrigation canal, about 16 miles, in all not exceeding 32 miles.

615. For a line of railway from Dawson to Stewart River, passing at or near Grand Forks, not exceeding 84 miles.

616. To the Canadian Pacific Railway Company, for a branch line from a point on the main line between Moosomin and Elkhorn, north-westerly to a point in the neighbourhood of the Pheasant Hills, not exceeding 136 miles.

617. For a line of railway from a point at or near Medicine Hat on the Canadian Pacific Railway to the coal fields in or near townships 12 and 13, range 6, west of the fourth principal meridian, not exceeding 8 miles.

618. To the Great Northern Railway of Canada, for a line of railway from Garneau Junction to the Quebec bridge, not exceeding 70 miles.

619. To the Halifax and South-western Railway Company, for a line of railway to Barrington Passage, in addition to and in continuation of the 77 miles mentioned in paragraph *(b)* of item 23 (567) of this section, not exceeding 35 miles.

620. To the Lake Superior, Long Lake and Albany Railway Company, for a line of railway from Peninsula Harbour in a northerly direction, not exceeding 10 miles.

621. To the Cumberland Railway and Coal Company, for a line of railway from Parrsboro' Station to Riverside Wharf, not exceeding 1 mile.

622. To the Indian River Railway Company, for a line of railway from a point at or near the north end of Lake Megantic, thence southerly along the said lake to a point on the International Boundary, not exceeding 19 miles.

3. The Governor in Council may grant the subsidies hereinafter mentioned towards the construction of the bridges also hereinafter mentioned, that is to say :—

623. Towards the construction and completion of a railway bridge and approaches over the Nicolet River at Nicolet, in lieu of the grant under item 39 of section 2 of chapter 8 of 1900, $15,000.

624. Towards the construction of the steel superstructure of a railway bridge on the St. Francis River, in the county of Yamaska, in lieu of the grant under item 38 of section 2 of chapter 8 of 1900, but subject to the same conditions as expressed therein, payable to the Canadian Bridge Company of Walkerville, as their claim may appear for work already done on the said bridge, $50,000.

625. To the Canadian Bridge Company of Walkerville. to strengthen and complete the foundation and approaches to the bridge over the St. Francis River subsidized in favour of the South Shore Railway Company by section 3 of chapter 7 of 1899, $35,000, which amount shall remain the first charge on the road, and shall be recouped to the Treasury out of subsidies earned or to be earned, $35,000.

626. To the Chateauguay and Northern Railway Company, in addition to the subsidy for the Bout de l'Ile bridge granted by item 33 of section 2 of chapter 8 of 1900, $50,000.

4. The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows :—

(*a.*) upon the completon of the work subsidized ; or

(*b.*) by instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken ; or

(*c.*) upon the progress estimates on the certificate of the Chief Engineer of the Department of Railways and Canals, that, in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars ; or

(*d.*) with respect to (*b*) and (*c*), part one way, part the other.

5. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways and bridges respectively ; all the lines and bridges for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1903, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the Company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council.

6. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Governor in Council may at all times provide and secure to other companies such running powers, traffic arrangements and other rights, as will afford to all railways connecting with the railways and bridges so subsidized, reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways ; and the Governor in Council shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and bridges hereby subsidized.

7. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the line in respect of which it has received such subsidy, and whenever required, shall furnish mail cars properly equipped for such mail service ; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Governor in

Council; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

8. As respects all railways and bridges for which subsidies are granted by this Act, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

9. The Governor in Council may make it a condition of the grant of the subsidies herein provided, or any heretofore authorized by any Act of Parliament as to which a contract has not yet been entered into with the company for the construction of the railway, that the company shall lay its road with new steel rails, made in Canada, if they are procurable in Canada of suitable quality, upon terms as favourable as other rails can be obtained, of which the Minister of Railways and Canals shall be judge.

By Special Act 4 Edward VII., Chap. 34, 1904.

1. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of terminals and right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of Government Railways, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, add careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

2. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinfter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of 50 per cent on so much of the average cost of the mileage subsidized as in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile:—

627. To the Bracebridge and Trading Lake Railway Company, for a railway from Bracebridge in Muskoka, to a point at or near Baysville, Ontario, in lieu of the subsidy granted by item 7 of section 2 of chapter 8 of 1900, not exceeding 14 miles.

628. To the Bruce Mines and Algoma Railway Company, for the following lines of railway:—

(a.) For that portion of its line of railway from Bruce Mines Junction southerly to the town of Bruce Mines, on Lake Huron, a distance not exceeding 3 miles;

(b) For the 6 miles of railway constructed from Gordon Lake Station, being the end of its line as subsidized by chapter 7 of 1901, northward to Rock Lake, a distance of 6 miles;

(c) For 12 miles from Rock Lake northward, a distance not exceeding 12 miles;

The subsidies to the said lines being granted in lieu of the subsidy granted by item 38 of section 2 of chapter 67 of 1903, not exceeding 21 miles.

629. To the Nepigon Railway Company, for the following lines of railway :—

(*a*.) From a point at or near Nepigon Station on the line of the Canadian Pacific Railway to Nepigon Lake, not exceeding 30 miles ;

(*b*.) From a point on Nepigon Bay of Lake Superior to a point on the west of Lake Helen on the line of the Nepigon Railway, not exceeding 3½ miles ;

(*c*.) From a point on the line of the Nepigon Railway at or near the crossing of the Fraser River, to a point on Lake Jesse, by way of Cameron's Falls, not exceeding 1½ mile :

(*d*.) From a point on the north shore of Lake Nepigon northerly, not exceeding 45 miles ;

The subsidies to the said lines being granted in lieu of the subsidy granted by item 33 of section 2 of chapter 57 of 1903, not exceeding 80 miles.

630. For the construction of a branch line of railway beginning at the Canadian Pacific Railway Company's main line at St. Philippe d'Argenteuil Station, or at a point between there and Grenville, thence in a northerly direction, in lieu of the subsidy granted by item 49 section 2 of chapter 57 of 1903, not exceeding 3 miles.

631. To the Chateauguay and Northern Railway, for a railway from a point in Hochelaga ward, Montreal, to a point on the Great Northern Railway in or near the Town of Joliette, passing at or near the Town of L'Assomption, Quebec, together with a spur line into the said town, in lieu of the subsidy granted by item 32 of section 2 of chapter 8 of 1900, not exceeding 42 miles.

632. To the Great Northern Railway Company of Canada, to enable it to extend its railway from Arundel to a point in the municipality of the united Townships of Preston and Hartwell, Province of Quebec, in lieu of the subsidy granted to the Montford and Gatineau Colonization Railway by item 6 of section 2 of chapter 57 of 1903, not exceeding 30 miles.

633. To the Chateauguay and Northern Railway Company, for a branch line from a point on its main line at or near Charlemagne, thence northerly and westerly to a point on the Montford and Gatineau Railway at or near Morin Flats, in lieu of the subsidy granted to the Montford and Gatineau Colonization Railway by item 41 of section 2 of chapter 57 of 1903, not exceeding 22 miles.

634. To the Ottawa River Railway Company, for a line of Railway from a point at or near St. Agathe des Monts Station towards the township of Howard in the County of Argenteuil, passing near Lakes St. Joseph and St. Marie, in a southerly direction, in lieu of the subsidy granted to the Montreal Northern Railway Company by item 58 of section 2 of chapter 57 of 1903, not exceeding 15 miles.

635. To the Ottawa River Railway Company, for a line of railway between a point in the Parish of St. Andrews, in the County of Argenteuil, and a point in the Parish of St. Lawrence, in the County of Jacques Cartier, passing through the Parishes of St. Placide, St. Eustache and St. Martin, in lieu of the subsidy granted by item 10 of section 2 of chapter 57 of 1903, not exceeding 38 miles.

636. For a line of railway from Lardo towards Upper Arrow Lake, British Columbia, in lieu of the subsidy granted by item 29 of section 2 of chapter 7 of 1903, not exceeding 30 miles

637. To the Western Alberta Railway Company, from a point on the United States boundary, west of range 27, northwesterly towards Anthracite, in the district of Alberta, in lieu of the subsidy granted by item 40 of section 2 of chapter 7 of 1899, not exceeding 50 miles.

3. The Governor in Council may grant the subsidy hereinafter mentionned towards the construction of the bridge also hereinafter mentioned, that is to say :—

638. To the Chateauguay and Northern Railway Company, the balance remaining unpaid of the subsidy granted by item 33 of section 2 of chapter 8 of 1900, for a single-track standard railway bridge, with two roadways 10 feet wide for free vehicular traffic, the same as upon a public highway, from Bout de L'Ile to Charlemagne at the Junction of the Ottawa and St. Lawrence Rivers, a sum not exceeding $51,000.

4. The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows :—

(*a*.) Upon the completion of the work subsidized ; or

(*b*.) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken ; or

(*c*.) Upon the progress estimates on the certificate of the Chief Engineer of the Department of Railways and Canals, that, in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars ; or

(*d*.) With respect to (*b*) and (*c*), part one way, part the other.

5. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively ; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways and bridges for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1904, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the Company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council.

6. The granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights, as will afford to all railways connecting with the railways and bridge so subsidized, reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways ; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and the bridge hereby subsidized. Provided always that any decision of the said Board made under this section may be at any time varied, changed, or rescinded by the Governor in Council as he deems just and proper.

7. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transpor-

tation for men, supplies, materials and mails over the portion of the lines in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed, and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of subsidy received by the company under the Act.

8. As respects all railways and the bridge for which subsidies are granted by this Act, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

9. The Governor in Council may make it a condition of the grant of the subsidies herein provided, or any heretofore authorized by any Act of Parliament as to which a contract has not yet been entered into with the company for the construction of the railway, that the company shall lay its road with new steel rails, made in Canada, if they are procurable in Canada of suitable quality, upon terms as favourable as other rails can be obtained, of which the Minister of Railways and Canals shall be the judge.

10. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the Chief Engineer of Government Railways, and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the Chief Engineer, and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of $3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said $3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Chief Engineer, entitles the company thereto: Provided always—

(a.) that the estimated cost, so certified, is not less on the average than $18,000 per mile for the whole mileage subsidized;

(b.) that no payment shall be made except upon a certificate of the Chief Engineer that the work done is up to the standard specified in the company's contract;

(c.) that in no case shall the subsidy exceed the sum of $6,400 per mile.

1. Whenever a contract has been duly entered into with a company for the construction of any line of railway subsidized by either of the Acts mentioned in the preamble, the Minister of Railways and Canals, at the request of the Company and upon the report of the chief engineer of government railways, and his certificate that he has made careful examination of the surveys, plans and profiles of the whole line so contracted for and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the probable and reasonable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer,

and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of $3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said $3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the chief engineer, entitles the company thereto: Provided always—

(a.) that the estimated cost, so certified, is not less on the average than eighteen thousand dollars per mile for the whole mileage subsidized;

(b.) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the Company's contract;

(c.) that in no case shall the subsidy exceed the sum of six thousand four hundred dollars per mile.

2. In construing this Act the word "cost" shall have the meaning assigned to it by the Act authorizing the granting of the subsidy.

By Act, 6 Edward VII, Cap 43, 1906, (assented to 13th July, 1906).

1. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any one case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile:—

639. To the Manitoulin and North Shore Railway Company (or to the Canada Central Railway Company, with the consent of the Manitoulin and North Shore Railway Company, and subject to the approval of the Governor in Council), for the following lines of Railway:—

(a) From Little Current thence crossing the Canadian Pacific Railway, at or near Stanley, and thence to Sudbury, not exceeding 64 miles.

(b) From a point on the said line of railway, between Little Current and Sudbury, westerly towards the Algoma Central and Hudson Bay Railway, not exceeding 100 miles; and

(c) From a point at or near Sudbury northerly, not exceeding 30 miles; the said subsidies being granted in lieu of the subsidies of 64 and 130 miles, granted by chapter 8 of 1900, section 2, item 6, as amended by section 5 of chapter 7 of 1901, and chapter 7 of 1901, section 2, item 14, respectively.

640. To the Algoma Central and Hudson Bay Railway Company for a line of railway from Sault St. Marie to a point on the Canadian Pacific Railway between White River and Dalton stations in the District of Algoma, not exceeding 200 miles, and, for a line of Railway from Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway not exceeding 25 miles; in lieu of the subsidies of 40, 50 and 135 miles granted by chapter 7 of 1899, section 2, item 23, chapter 8 of 1900, section 2, item 4 and chapter 7 of 1901, section 2, item 20, respectively.

641. To the Lotbinière and Megantic Railway Company to extend its railway southerly from a point at or near Lyster in Megantic County to or towards a point at or near Lime Ridge in the Township of Dudswell; in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 8, not exceeding 50 miles.

642. For a line of railway from Lake Nominingue to La Lièvre, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 44, not exceeding 35 miles.

643. For a line of railway from a point on the Intercolonial Railway at or near Dartmouth, in the County of Halifax, to Guysborough, in the County of Guysborough, with branch lines to a point on the Intercolonial Railway at or near New Glasgow, in the County of Pictou, and also to Country Harbour, in the County of Guysborough, not exceeding in the whole 236 miles in lieu of subsidies of 116 and 120 miles granted by chapter 57 of 1903, section 2, items 19 and 63 respectively.

644. For a line of railway from Wellington to Union Bay, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 68, not exceeding 55 miles.

645. For a line of railway from a point at or near Sharbot Lake or Bathurst Station, in the Province of Ontario, or between those points via Lanark Village to Carleton Place, in lieu of the subsidy granted by chapter 7 of 1901, section 2, item 17, not exceeding 41 miles.

646. For a line of railway from Cape Tourmente towards Murray Bay, in lieu of the subsidy granted by chapter 5 of 1892, not exceeding 20 miles.

647. To the Atlantic, Quebec and Western Railway Company, for a line of railway from Gaspé to a point at or near Causapscal on the Intercolonial Railway and from that point to Edmundston, not exceeding 260 miles; and for a line of railway from Paspebiac to Gaspé as near the shore as practicable, not exceeding 102 miles; in lieu of the subsidies granted by chapter 57 of 1903, section 2, item 51.

648. To the Nipigon Railway Company, for the following lines of railway:—

(a) From a point at or near Nipigon Station on the line of the Canadian Pacific Railway to Nipigon Lake, not exceeding 30 miles.

(b) From a point on Nipigon Bay of Lake Superior to a point on the west of Lake Helen on the line of the Nipigon Railway, not exceeding 3½ miles.

(c) From a point on the line of the Nipigon Railway at or near the crossing of the Fraser River, to a point on Lake Jesse, by way of Cameron's Falls, not exceeding 1½ miles.

(d) From a point on the North shore of Lake Nipigon northerly, not exceeding 45 miles;

The said subsidies to the said lines being granted in lieu of the subsidies granted by chapter 34 of 1904, section 2, item 3, not exceeding in the whole 80 miles.

649. For a line of railway from Quebec towards Seven Islands, including branches to Murray Bay and Baie St. Paul, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 48, not exceeding 200 miles.

650. For a line of railway from Roberval westward towards James Bay, in lieu of the subsidies granted by chapter 57, of 1903, section 2, items 11 and 52, not exceeding 100 miles.

651. To the Quebec Central Railway Company for an extension of its line of railway from St. Francis to St. George not exceeding 9 miles; and for a line of railway from Scott Junction to the Quebec Bridge, not exceeding 23 miles; in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 46.

652. To the Western Alberta Railway Company for a line of railway from a point on the United States Boundary, west of range 21, northwesterly towards Anthracite, in the Province of Alberta, in lieu of the subsidy granted by chapter 34 of 1904, section 2, item 11, not exceeding 50 miles.

653. To the Shediac and Coast Railway Company for a line of railway from Shediac to Shemogue and towards Cape Tormentine in Westmoreland County, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 17, not exceeding 38 miles.

654. For a line of railway from St. Constant in the County of Laprairie and Napierville, through St. Edouard, St. Cyprien and Lacolle to a point at or near the International boundary line on the Delaware and Hudson Railway (Grand Trunk) lieu of the 19 and 12 mile subsidies granted by chapter 7 of 1899, section 2, item 10 and chapter 4 of 1894 respectively, not exceeding 28 miles.

655. To the Lake Superior, Long Lake and Albany Railway Company for a line of railway from Peninsula Harbour in a northerly direction, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 76, not exceeding 10 miles.

656. For a line of railway from Owen Sound in the Province of Ontario to Meaford, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 34, not exceeding 30 miles.

657. To the Kingston, Smith's Falls and Ottawa Railway Company for a line of railway from Kingston to Ottawa, being a revote of the subsidy granted by chapter 4 of 1897, not exceeding 101 miles.

658. To the Lotbinière and Megantic Railway Company, for a line of railway from a point on its line between Lyster and Lime Ridge, to a point at or near the Bridge over the St. Lawrence at or near Quebec, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 45, not exceeding 30 miles.

659. For a line of railway from a point on the Quebec and Lake St. John Railway, near the River Jeannotte to La Tuque, on the St. Maurice River, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 57, not exceeding 35 miles.

660. To the Halifax and South Western Railway Company, for a line of railway from a point at or near Halifax, to a point at or near Barrington Passage, (except that part east of Bridgewater which formerly formed part of the line of the Central Railway), in lieu of the 68, 77 and 35 miles of subsidies granted by chapter 57 of 1903, section 2, item 23 (*a*) and (*b*), and item 75, respectively, not exceeding 185 miles.

661. To the Bay of Quinté Railway Company, for a line of railway from a point at or near the Village of Tweed, thence northwesterly to a point at or near the Village of Bannockburn, in the County of Hastings, being a revote in part of the subsidy granted by chapter 7 of 1899, section 2, item 45, and in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 37, not exceeding in all 20 miles.

662. For a line of railway from a point at or near Baptiste, easterly to a point at or near Renfrew, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 32, not exceeding 75 miles.

663. For a line of railway from the Station of Lac Bouchette, or from a point one mile east of the said station, on the Quebec and Lake St. John Railway, to St. André, in lieu of subsidy granted by chapter 57 of 1903, section 2, item 47, not exceeding 13 miles.

664. For a line of railway from Debert Station, on the Intercolonial Railway, to Debert Coal Mine, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 20, not exceeding 4½ miles.

665. For a line of railway from a point at or near Toulon, to a point on the Icelandic River, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 27, not exceeding 35 miles.

666. To the Ontario, Northern and Temagami Railway Company (formerly the Temagami Railway Company), for a line of railway from a point at or near Sturgeon Falls, in a northwesterly direction, to a point on the westerly shore of Lake Temagami, in the District of Nipissing, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 36, not exceeding 50 miles.

667. To the Quebec and Lake St. John Railway Company, for a line of railway from Roberval to the Government wharf at Lake St. John, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 40, not exceeding one mile.

668. For a line of railway from Truro northerly towards Brule, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 64, not exceeding 34 miles.

669. To the Kootenay Central Railway Company, for a line of railway from Golden towards the International Boundary line, via Windermere and Fort Steele, and crossing the Crow's Nest Railway at or near Elko, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 66, not exceeding 186 miles.

670. To the Brockville, Westport and Sault Ste. Marie Railway Company, the balance remaining unpaid of the subsidy granted by chapter 3 of 1889, not exceeding $3,200 per mile, and also the balance remaining unpaid of the subsidy granted by chapter 2 of 1890, which was regranted by chapter 5 of 1892; the whole not exceeding $86,800, being a revote of the subsidy granted by chapter 4 of 1894, and that the said subsidy or so much thereof as has heretofore been agreed upon by the terms of an agreement filed in the Department of Railways and Canals between said Brockville, Westport and Sault St. Marie Railway Company and the creditors of said Railway Company, to be paid over to the said creditors or the legal representatives of said creditors as mentioned in said agreement.

671. For a line of railway from Jonquieres to La Baie des Ha Ha, in lieu of subsidy granted by chapter 57 of 1903, section 2, item 7, not exceeding 20 miles.

672. For a line of railway from St. Rose via the east side of Lake Ainslie to or towards Orangedale on the Intercolonial Railway, not exceeding 34 miles; and for a line of railway from a point on the Intercolonial Railway at or near Mines Road Station to the wharf at Caribou Cove not exceeding four miles; in lieu of the subsidy granted by chapter 57 of 1903, section 2, items 18 and 62.

673. For a line of railway from a point at or near Wolfville on the Dominion Atlantic Railway to the Government Pier at the Basin of Minas, not exceeding one mile, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 25.

674. To the Great Northern Railway of Canada for a line of railway in extension of its railway from a point at or near Arundel to a point in the municipality of the United Townships of Preston and Hartwell, not exceeding 30 miles; and for a line of railway connecting its Montford and Gatineau line with the main line at St. Jerome, not exceeding 22 miles; in lieu of the subsidies granted to the Montford and Gatineau Colonization Railway Company by items 6 and 41 of section 2 of chapter 57 of 1903.

675. To the Great Northern Railway of Canada, for a line of railway from, at or near Garneau Junction to or towards the Quebec Bridge, not exceeding 70 miles, in lieu of the subsidy granted by item 74 of section 2, of chapter 57 of 1903.

676. For a line of railway from a point at or near Ste. Agathe des Monts Station towards the Township of Howard, in the County of Argenteuil, passing near Lakes St. Joseph and Ste. Marie, in a southerly direction, not exceeding 15 miles; and for a line of railway between a point in the parish of St. Andrews, in the County of Argenteuil, and a point in the parish of St. Laurent, in the County of Jacques Cartier, passing through the parishes of St. Placide, St. Eustache and St. Martin, not exceeding 38 miles; in lieu of the subsidies granted by chapter 34 of 1904, items 8 and 9 of section 2, not exceeding in the whole 53 miles.

677. To the Kettle River Valley Railway Company for a line of railway from Grand Forks to a point 50 miles up the North Fork of Kettle River, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 67, not exceeding 50 miles.

678. To the Ottawa Northern and Western Railway for a line of railway from Aylmer to a point of junction with the Interprovincial Bridge approach in the City of Hull (except that portion thereof beginning at a point of junction with the line of the Hull Electric Railway in the City of Hull and terminating at a point on the main line of the Canadian Pacific Railway at the east end of its Hull Station yard) not exceeding nine miles, in lieu of the subsidy granted by item 12 of section 2 of chapter 7, of 1899, and by the first portion of item 13 of section 2 of chapter 57 of 1903.

679. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from Golden Lake to Bancroft, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 3, not exceeding 51 miles.

680. To the Interprovincial and James Bay Railway Company, for a line of railway from the Lake Temiskaming at the present terminus of the Canadian Pacific Railway in a northerly direction, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 42, not exceeding 50 miles.

681. For a line of railway from Waltham Station to Ferguson Point, in the County of Pontiac, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 43, not exceeding 20 miles.

682. To the Matane and Gaspé Railway Company, for a line of railway from a point at or near St. Octave, on the Intercolonial Railway, to Matane, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 54, not exceeding 30 miles.

683. For a line of railway from the Village of Haliburton, via the Village of Whitney, towards the Town of Mattawa, Ontario, in lieu of the subsidies granted by chapter 7 of 1899, section 2, item 25, and chapter 8 of 1900, section 2, item 9, not exceeding 60 miles.

684. For a line of railway from Dawson to Stewart River, passing at or near Grand Forks, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 71, not exceeding 84 miles.

2. That unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway, nor the cost of terminals, nor the cost of right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of the Department of Railways and Canals, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

3. That the subsidies to be authorized towards the construction of any railway shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided herein, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

(*a*) upon the completion of the work subsidized; or

(*b*) by instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or

(*c*) upon the progress estimates on the certificate of the Chief Engineer of the Department of Railways and Canals, that, in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or

(*d*) with respect to (*b*) and (*c*), part one way, part the other.

4. That the subsidies to be authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as established to the satisfaction of the Governor in Council their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1906, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines shall be subject to the approval of the Governor in Council.

5. That the granting of such subsidies, and the receipt thereof by the respective companies, shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights, as will afford to all railways connecting with the railways so subsidized, reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways so subsidized: Provided always that any

decision of the said Board made under this section may be at any time varied, changed, or rescinded by the Governor in Council as he deems just and proper.

6. That every company so receiving a subsidy, its successors and assigns, and any person or company controlling or operating the railway or portion of railway so subsidized, shall each year furnish to the Government of Canada, transportation for men, supplies, materials and mails, over the portion of the lines in respect of which it has received such subsidy, and whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed, and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy so received by the company.

7. That as respects all railways for which subsidies are granted, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

8. That the Governor in Council may make it a condition of the grant of the subsidies herein provided, that the company shall lay its road with new steel rails, made in Canada, if they are procurable in Canada of suitable quality, upon terms as favourable as other rails can be obtained, of which the Minister of Railways and Canals shall be the judge.

9. That whenever a contract has been duly entered into with a company for the construction of any line of railway so subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the Chief Engineer of the Department of Railways and Canals, and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the Chief Engineer, and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of $3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said $3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals and upon the report and certificate of the said Chief Engineer, entitles the company thereto; Provided always:—

(*a*) that the estimated cost, as certified, is not less on the average than $18,000 per mile for the whole mileage subsidized;

(*b*) that no payment shall be made except upon a certificate of the Chief Engineer that the work done is up to the standard specified in the company's contract;

(*c*) that in no case shall the subsidy exceed the sum of $6,400 per mile.

SESSIONAL PAPER No. 20

By Act, 6-7 Edward, Cap 40, 1907, assented to 27 April, 1907.

1. The Governor in Council may grant a subsidy of $3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than $15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway, not exceeding the mileage hereinafter stated, which shall cost more on the average than $15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of $3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of $15,000 per mile, such subsidy not exceeding in the whole the sum of $6,400 per mile :—

685. To the Central Ontario Railway for an extension of its railway from a point at or near Bancroft to a point on the Canada Atlantic Railway at or near Whitney, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 4, not exceeding 40 miles.

686. For a line of railway from Woodstock to the International Boundary in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 15, not exceeding 26 miles.

687. For a line of railway from a point on the Canadian Pacific Railway at or near Welsford or Westfield, or between the said two points, to Gagetown, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 16, not exceeding 30 miles.

688. For a line of railway from Liverpool to Milton, Nova Scotia, in lieu of part of the subsidy granted by Chapter 57 of 1903, Section 2, Item 23(*d*), not exceeding 7 miles.

689. For a line of railway from Milton to Caledonia, Nova Scotia, in lieu of part of the subsidy granted by Chapter 57 of 1903, Section 2, Item 23(*d*), not exceeding 22 miles.

690. For a line of railway from Cheticamp to a point on the line already built between Broad Cove and Point Tupper, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 24, not exceeding 37 miles.

691. For a line of railway from a point on the Dominion Atlantic Railway to the Government pier or wharf at Canning, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 25, not exceeding 1 mile.

692. To the Nicola, Kamloops and Similkameen Coal and Railway Company for a line of railway from a point at or near Spence's Bridge, on the Canadian Pacific Railway, to Nicola Lake, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 26, not exceeding 47 miles.

693. To the Edmonton, Yukon and Pacific Railway Company, for a line of railway from the Town of Strathcona to Edmonton and thence westerly towards the Yellowhead Pass, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 28, not exceeding 50 miles.

694. For a line of railway from Fredericton to Woodstock, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 29, not exceeding 59 miles.

695. For a line of railway from Hawkesbury, Ontario, to South Indian, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 30, not exceeding 35 miles.

696. To the Tilsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Woodstock northerly to a point on the Grand Trunk Railway at Berlin, or from Ingersoll to Stratford, or to any point on the Grand Trunk Railway between these places, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 31, not exceeding 35 miles.

697. To the Canadian Northern Ontario Railway Company for a line of railway from Toronto, via the east side of Lake Simcoe, to a point at, near or beyond Sudbury through Parry Sound, in lieu of the subsidy granted to the James Bay Railway Company by Chapter 57 of 1903, Section 2, Item 39, not exceeding 265 miles.

698. For a branch line from a point at or near the intersection of the Canadian Pacific Railway and the Canadian Northern Quebec Railway (formerly the Great Northern Railway) between St. Philippe d'Argenteuil and Lachute, thence in a northerly direction passing through the Village of Brownsburg, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 49, not exceeding 4·2 miles.

699. To the Orford Mountain Railway Company for the following lines of railway, namely:—from Bolton Line to Mansonville 7·54 miles; from Mansonville to the International Boundary 3 12 miles; from Windsor Mills to Brompton Falls 8 miles: from Melbourne Road Crossing to Melbourne Village 3·50 miles; and from a point on its main line of railway to the south of end of Bonella Lake 5 miles; in lieu of the subsidies granted by Chapter 57 of 1903. Section 2, Item 50, but not exceeding in the whole 27 miles.

700. To the Canadian Northern Quebec Railway Company, for a line of railway from a point on its main line at or near L'Epiphanie, passing by way of the Parish of St. Jacques de l'Achigan, to the Village of Rawdon, in lieu of the subsidy granted to the Chateauguay and Northern Railway Company by Chapter 57 of 1903, Section 2, Item 55, not exceeding 16 miles.

701. To the York and Carleton Railway Company, for a line of railway from its present terminus westerly, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 61, not exceeding 5 miles.

702. To the Midway and Vernon Railway Company, for a line of railway from Midway to Vernon, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 69, not exceeding 150 miles.

703. For a line of railway from a point at or near the north end of Lake Megantic, thence along the said lake to a point on the International Boundary at or near Rivière Morte, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 78, not exceeding 19 miles.

704. For a line of railway from Wellington to or towards Union Bay by way of Alberni in lieu of the subsidy granted by Chapter 43 of 1906, Section 1, Item 6, not exceeding 55 miles.

705. For a line of railway from Ste. Rose (or from Chimney Corner Coal Mines to a point at or near Chimney Corner Cove) thence via the east side of Lake Ainslie to or towards a point on the Intercolonial Railway at or near Orangedale, not exceeding 34 miles; and for a line of railway from a point on the Intercolonial Railway between Orangedale and Point Tupper to Caribou Cove, or Inhabitants Bay or River, not exceeding 4 miles; in lieu of the subsidies granted by Chapter 43 of 1906, Section 1, Item 34.

706. To the Klondike Mines Railway Company for the following lines of railway, namely :—

(*a*) for a line of railway from Dawson to a point at or near Sulphur Spring, not exceeding 31 miles ;

(*b*) for a line of railway from a point at or near Sulphur Spring to a point at or near the Divide between Dominion and Flat Creeks, not exceeding 45 miles ;

(*c*) for a line of railway from a point at or near the said Divide to or towards the Stewart River, not exceeding 8 miles ;

The whole in lieu of the subsidy granted by Chapter 43 of 1906, Section 1, Item 46.

707. For a line of railway from St. Peter's to Louisbourg, in lieu of the subsidy granted by Chapter 57 of 1903, Section 2, Item 65, not exceeding 50 miles.

708. For a line of railway from Grandique Ferry, to Arichat, Nova Scotia, being a revote of the subsidy granted by Chapter 7 of 1901, Section 2, Item 15, not exceeding 8 miles.

709. For a line of railway from Connors, at the terminus of the Témiscouata Railway, to a point on the boundary line between New Brunswick and Quebec, at the foot of Bean Lake, being a revote of part of the subsidy granted by Chapter 7 of 1901, Section 2, Item 2, not exceeding 18 miles.

710. 2. Resolved, That the Governor in Council may grant, towards the construction and completion of a railway bridge and approaches over the Nicolet River at Nicolet, in lieu of the subsidy granted by Chapter 57 of 1903, Section 3, Item 1, a subsidy of $15,000.

3. Resolved, That in these Resolutions, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding $25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway nor the cost of terminals nor the cost of right of way of the railway in any city or incorporated town ; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the Chief Engineer of the Department of Railways and Canals, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

4. Resolved, That the subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in these Resolutions, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows :—

(*a*) Upon the completion of the work subsidized ; or

(*b*) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed sections bears to that of the whole work undertaken ; or

(*c*) Upon the progress estimates on the certificate of the Chief Engineer of the Department of Railways and Canals that, in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars ; or

(*d*) With respect to (*b*) and (*c*), part one way, part the other.

5. Resolved, That the subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways and bridge respectively; all the lines and the bridge for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1907, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the Company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridge shall be subject to the approval of the Governor in Council.

6. Resolved, That the granting of such subsidies and the receipt thereof by the respective companies, shall be subject to the condition that the Board of Railway Commissioners of Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with the railways and bridge so subsidized reasonable and proper facilities in exercising such running powers, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and bridge hereby subsidized: Provided always that any decision of the said Board made hereunder may be at any time varied, changed, or rescinded by the Governor in Council, as he deems just and proper.

7. Resolved, That every company receiving a subsidy hereunder, its successors and assigns, and any person or company controlling or operating the railway or portion of railway hereby subsidized, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed, and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company hereunder.

8. Resolved, That as respects all railways and the bridge for which subsidies are granted hereby, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

9. Resolved, That the Governor in Council may make it a condition of the grant of the subsidy herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway and bridge and the rolling stock for the first equipment of the railway from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

10. Resolved, That whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the Chief Engineer of the Department of Railways and Canals, and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the certificate of the Chief Engineer, and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of $3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said $3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said Chief Engineer, entitles the company thereto: Provided always—

(*a*) that the estimated cost, as certified, is not less on the average than $18,000 per mile for the whole mileage subsidized;

(*b*) that no payment shall be made except upon a certificate of the Chief Engineer that the work done is up to the standard specified in the company's contract;

(*c*) that in no case shall the subsidy exceed the sum of $6,400 per mile.

PART IV

MISCELLANEOUS STATEMENTS

No.

Subsidy Agreements for the Construction of Railways

No. of Contract.	Date of Signature.	Name of Railway.	Line of Railway to be Constructed.	Authority for Execution.	
				Act of Parliament.	Order in Council.
16374	Oct. 15, 1906	Bay of Quinté Ry. Co.	From Tweed to Bannockburn, Co. of Hastings.	Can., 1906, c. 43	Sept. 21, 1906..
16347	" 8, 1906	Halifax & South Western.	From point at or near Halifax to point at or near Barrington Passage, &c., in lieu of the 68, 77 and 35 miles granted by cap. 57 of 1903.	Can., 1906, c. 43	" 21, 1906..
16371	" 10, 1906	Napierville Junction Ry. Co.	From St. Constant to point at or near International Boundary line on Delaware and Hudson Ry.	Can., 1906, c. 43	" 21, 1906..
16433	Nov. 24, 1906	Quebec and Lake St. John Ry. Co.	From Roberval to Govt. wharf at Lake St. John.	Can., 1906, c. 43	Oct. 17, 1906..
16496	Jan. 28, 1907	Quebec Central Ry....	From St. Francois to St. George..	Can., 1906, c. 43	" 12, 1906..
16295	Aug. 20, 1906	York and Carleton....	From its present terminus westerly	Can., 1903, c. 57	Nov. 3, 1905..

Department of Railways and Canals
Ottawa, August 3, 1907.

1.

entered into during the Fiscal Year ended March 31, 1907.

Amount of Subsidy.		Number of Miles Subsidized.	Maximum Grade. Feet per Mile.	Radius of Curvature not less than	Width of Clearing each side.	Width of Cutting.	Embankment.	Steel Rails, lbs. per lineal yard.	Date for Completion.
Per Mile.	Not exceeding								
$	$		Feet.	Feet.	Feet.	Feet.	Feet.	Lb.	
3,200	6,400	20	28·5	955	50	20	15	56	Aug. 1, 1907.
3,200	6,400	185	80	764·49	50	20	15	56	" 1, 1908.
3,200	6,400	28	26	2,865	50	20	15	56	July 31, 1910.
3,200	6,400	1	92·4	410·28	50	20	15	56	Aug. 1, 1908.
3,200	6,400	9	52·80	955	50	20	15	56	Oct. 1, 1907.
3,200	6,400	5	63	573	33	20	15	56	Nov. 1, 1906.

HAZEN HANSARD,
Law Clerk.

No. 2

CONTRACTS entered into during the Nine months forming the Fiscal Year ended March 31, 1907.

INTERCOLONIAL RAILWAY.

No. of Contract.	Date of Signature.	Contractors.	General Description.
	1906.		
16256	July 14..	Nova Scotia Steel and Coal Co., Ltd.	Deliver 83,840 pairs of steel splice bars at Trenton, N.S.
16257	" 17..	Farquhar Bros.	Wiring of passenger station at Windsor, N.S.
16258	" 18..	Napoleon Dumont	Erect addition to freight shed at St. Henri Junction, Quebec.
16275	Aug. 3..	Rhodes, Curry & Co., Ltd.	Deliver 200 hopper cars.
16278	" 4..	A. Beauchesne	Erecting hot water heating apparatus in station at Drummondville, Que.
16292	" 18..	Theodore Richard	Erection of cribwork, &c., at St. Alexis station, Que.
16306	" 27..	F. E. McManus	Erect heating and plumbing fixtures in baggage room at St. John, N.B.
16310	" 29..	E. F. Munro	Construct extension to freight shed, loading platform and erection of crane foundation at New Glasgow, N.S.
16313	" 27..	Canadian Bridge Co., Ltd.	Construct bridges at Enfield, Elmsdale and Shubenacadie, N.S.
16319	Sept. 10..	J. B. McManus, Ltd.	Filling pond east of railway station at Charlottetown.
16326	" 18..	E. A. Wallberg	Erect freight car repair shop at Moncton, N.B.
16349	Oct. 8..	Joseph Gosselin	Erect station at Chaudière, Que.
16350	" 8..	McNeil Bros.	Erect freight shed at Iona, N.S.
16351	" 8..	S. W. Campbell	Remodel station at Pictou, N.S.
16352	" 8..	Rhodes, Curry & Co., Ltd.	Erect planing mill at Moncton, N.B.
16353	" 8..	John McDougall & Co	Deliver 750 33-in. car wheels.
16367	Sept. 8..	J. B. McManus, Ltd.	Erect station at Shediac, N.B.
16368	Oct. 10..	Cloutier & Gaudreau	Improvement at Drummondville, Que.
16375	" 20..	The Harris Abattoir Co., Ltd.	Railway siding at Sydney, C.B.
16390	" 29..	E. A. Wallberg	Paint shop, repair shop and office building at Moncton, N.B.
16394	" 15..	Antigonish Electric Co.	Wiring of station at Antigonish, N.S.
16395	Nov. 5..	J. W. Dobson	Raising wharf at Pictou Landing.
16415	" 5..	The Great North West Telegraph Co.	Provide, &c., wire from Moncton to Ottawa.
16451	Dec. 18..	A. Proulx	Erect freight house at St. Pierre, Que.
16452	" 20..	M. E. Keefe	Erect 36-stall engine house at Halifax, N.S.
16453	Nov. 20..	John Starr, Son & Co.	Instal auxiliary fire alarm system in yards, &c., of Intercolonial Ry. at deep water terminus, Halifax.
16455	Dec. 7..	F. A. Ronnan & Co.	Erect superstructure of a double track bridge over the Sackville river, near Bedford Station, N.S.
16458	" 29..	J. H. McKay	Erect combined station, dwelling and freight room at Pugwash Junction, N.S.
	1907.		
16469	Jan. 8..	Willard Kitchen	Construct 50,000-gallon water tank and pipe line at Glengarry, N.S., and pipe line at Campbellton, N.B.
16475	Jan. 15..	John N. McElmon	Removal of freight shed at Windsor Junction, N.S.
16478	" 18..	Emil A. Wallberg	Erect locomotive shops at Moncton, N.B.
16479	" 15..	H. Boulay & Cie.	Erect freight shed, &c., at Salmon Lake, Que.
16482	" 15..	Town of Rimouski	Supply water at Rimouski, Que.
16485	" 22..	Pictou Foundry and Machine Co.	Supply and installation of a hot water heating apparatus in agent's dwelling at Pictou, N.S.
16488	" 24..	Galena Signal Oil Co.	Supply Sibley Perfection Signation oil.
16489	" 24..	" "	Supply valve, coach, engine and car oils.
16493	" 8..	Dominion Bridge Co., Ltd.	Erect bridge at Doaktown, N.B.
16494	" 22..	Willard Kitchen	Erect 50,000-gallon water tank at Sackville, N.B.
16497	" 28..	W. S. Wright	Improve station, enlarge freight shed and construct baggage room at Rothesay, N.B.
16498	" 28..	Chappell Bros. & Co., Ltd.	Erect station, freight shed and platform at Sydney Mines, N.S.
16506	Feb. 18..	Willard Kitchen	Erect bridge at Boiestown, N.B.
16509	" 20..	W. P. McNeil	Deliver three through steel turntables.
16513	" 21..	Willard Kitchen	Grading and double tracking cotton factory branch, Halifax, N.S., &c.
16514	" 21..	"	Excavation on west side of Water St., Halifax, N.S.

SESSIONAL PAPER No. 20

CONTRACTS intered into during the Nine months, &c.—*Continued.*

INTERCOLONIAL RAILWAY—*Continued.*

No. of Contract.	Date of Signature.	Contractors.	General Description.
	1907.		
16519	Feb. 19..	Rhodes, Curry & Co., Ltd.....	Delivery of two postal cars.
16523	Mar. 13..	Beazley Bros.....	Removal and dredging out of pier No. 9 at Halifax, N.S.
16528	" 12..	The Locomotive and Machine Co. of Montreal, Ltd.	Erect bridge at Boyer River.
16544	" 16..	Canada Foundry Co., Ltd.....	Bridges at Harbour au Bouche, &c.
16547	" 22..	Locomotive and Machine Co. of Montreal.	Bridges at Stewiacke, Truro, Hall's Creek and St. Henri.
16555	" 20..	Dominion Bridge Co., Ltd.....	Seventy-foot turntable for Newcastle, N.B.
16557	Feb. 20..	H. G. Hagen & Co.....	Provide hot water heating apparatus for freight office at Sydney, N.S.
16571	Mar. 30..	Thos. A. Barnhill & Co.....	Erect dwelling for station master at Riversdale, N.S.

PRINCE EDWARD ISLAND RAILWAY.

	1906.		
16259	July 5..	The Canadian Fairbanks Co., Ltd...	Delivery of a gasoline engine for the swing span of the Hillsborough Bridge.
16294	Aug. 18..	Willard Kitchen.....	Removal of Lake Verde Station and supplies of materials in connection therewith.
16314	" 27..	M. F. Schurman & Co.....	Deliver 8,100 lineal feet of portable snow fence..
16317	Sept. 10..	W. S. Kinnear & Son.....	Painting of bridges on Murray Harbour and Montague branches.
16319	" 10..	J. B. McManus, Ltd.....	Filling pond east of railway station at Charlottetown.
16325	" 10..	J. M. Clark and D. R. Morrison.....	Erection and completion of three-stall engine house at Summerside, P.E.I.
16354	Oct. 8..	Canadian Locomotive Co., Ltd.....	Deliver two 10-wheel narrow gauge locomotives.
16369	Oct. 10..	D. R. Morrison.....	Construct drain at Alberton, P.E.I.
16379	" 23..	Bruce Stewart & Co.....	Supply turning and operating gear for swing span of Hillsborough Bridge.
16416	Nov. 9..	Reid & Archibald.....	Erect cribwork rest piers for swing span of Hillsborough Bridge.
16418	" 12..	E. A. Wallberg.....	Erect brick car shop at Charlottetown, P.E.I.
	1907.		
16464	Jan. 5..	"	Construct erecting machine and blacksmith shop at Charlottetown.
	1906.		
16480	Dec. 20..	Provincial Government.....	For operation in respect to highway use of Hillsborough Bridge.
	1907.		
16482	Jan. 21..	M. F. Schurman & Co.....	Remove and remodel old station at Kensington, P.E.I.

CHAMBLY CANAL.

	1907.		
16499	Jan. 12..	Montreal Light, Heat and Power....	Agreement to settle all claims made by His Majesty against company consequent upon damages done to canal electric power-house.

GALOPS CANAL.

	1906.		
16420	Nov. 20..	George A. Begy.....	Rebuilding retaining walls at Iroquois, Ont.

CONTRACTS intered into during the Nine months, &c.—*Continued.*

GRENVILLE CANAL.

No. of Contract.	Date of Signature.	Contractors.	General Description.
	1907.		
16501	Feb. 8..	The Phœnix Bridge and Iron Works, Ltd.	Erect bridge over canal at Grenville, Que.

LACHINE CANAL.

	1906.		
16262	July 6..	Lakefield Portland Cement Co.....	Supply 3,000 barrels of cement.
16417	Nov. 14..	Quinlan & Robertson.....	Grading and finishing surface on north side of lock 2.
	1907.		
16508	Feb. 20..	C. Strubbe.....	Supply 3,000 barrels of Portland cement.
16518	Mar. 4..	Quinlan & Robertson.....	Underpinning old masonry wall and constructing new concrete wall at Montreal Warehousing Co. basin No. 2.

RIDEAU CANAL.

	1907.		
16492	Jan. 22..	Polson Iron Works, Ltd.....	Deliver 80-foot screw tug.
16495	" 15..	Canada Atlantic Railway Co.....	Agreement varying certain leases.
16554	Mar. 28..	Polson Iron Works, Ltd.....	Electric lighting equipment for 80-foot screw tug.

SAULT STE. MARIE CANAL.

	1906.		
16324	Sept. 4..	Kenneth McK. Wright.....	Construct sidewalk along walls of Canadian Sault Canal lock.
16396	Nov. 5..	" "	Erect shelter and lunch house, Sault Ste. Marie, Ont.
	1907.		
16474	Jan. 14..	C. S. Boone.....	Stone protection bank or backing to the new extension to the south pier at the upper entrance of canal.
16521	Mar. 11..	"	Deepen and widen channel way of upper entrance.

SOULANGES CANAL.

	1906.		
16428	Nov. 22..	Theodore Belanger.....	Erect three cottages at Coteau du Lac.
16449	Dec. 17..	Quinlan & Robertson.....	Erect wharf at Cascades Point, Que.

CONTRACTS entered into during the Nine months, &c.—*Concluded.*

TRENT CANAL.

No. of Contract.	Date of Signature.	Contractors.	General Description
	1906.		
16260	July 4..	Lakefield Portland Cement Co., Ltd.	Supply 1,000 barrels Portland cement.
16316	Aug. 30..	The Lake Simcoe Dredging Co.....	Improve east branch of Holland River.
16328	" 28..	Dominion Bridge Co., Ltd.....	Erect swing bridge at Young's Point.
16381	Oct. 12..	" "	Erect swing bridge over Holland River.
16437	Dec. 1..	D. Conroy & Sons.....	Construct substructure of Holland River bridge.
	1907.		
16532	Mar. 15..	Polson Iron Works, Ltd.....	Construct and delivery of an 80-foot screw tug.

WELLAND CANAL.

	1906.		
16293	Aug. 18..	Joseph Battle.....	Placing stone protection along certain portions of summit level between Thorold and Port Colborne.
16321	Sept. 10..	M. J. Hogan.....	Constructing a turning basin and dock at Welland.
16346	Oct. 8..	Peter Lyall & Sons.....	Construct grain elevator at Port Colborne, Ont.
16348	" 8..	Cunningham & Sons.....	Iron gears and pinions for hoisting valves, 1906.
16392	" 15..	Edward Conroy.....	Renew a portion of cast pier at Port Maitland, Ont.
	1907.		
16502	Feb. 18..	J. H. Kratz & Co.....	Supply timber, lumber, &c., for 1907.
16535	Mar. 16..	Cunningham & Son.....	Iron, brass and phosphor bronze castings for 1907.

HAZEN HANSARD,
Law Clerk.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 3, 1907.

No.

WATER POWER and other Public Property leased by the Department of Railways and

INTERCOLONIAL

No. of Lease.	Date of Signature.	Lessee.	Property Leased.
	1906.		
16298	Aug. 13..	Le Crédit Municipal Canadien.....	Privilege to lay 6-in. water pipe across lands and under tracks of I.C.R. at St. Romuald, P.Q.....
16301	" 27..	Canada Ry. News Co.....	License to sell on all passenger trains and at certain stations, newspapers, books, &c.....
16329	Sept. 20..	F. L. Fairweather.....	License to place automatic match vending machine in some station buildings of I.C.R.....
16360	Oct. 8..	Wm. F. Napier.....	Land west of Campbellton, N.B.....
16363	" 8..	Town of Stellarton.....	Privilege to lay 12-in. sewer pipe under tracks at Main Street.....
16370	" 10..	H. S. Gregory & Son.....	Land at St. John, N.B.....
16375	" 20..	The Harris Abattoir Co., Ltd.....	Railway siding at Sydney, C.B.....
16383	" 19..	Wm. H. Baxter.....	Land at Norton, N.B.....
16385	" 24..	D. M. Grant.....	Privilege to lay and maintain water pipe across lands and under tracks of I.C.R. at Eureka, N.S.....
16423	Nov. 20..	Tudhope Carriage Co.....	Land at Hopewell, N.S.....
16424	" 12..	Hattie O. Chapman.....	Land at Stewiacke, N.S.....
16425	" 12..	Geo. L. Tullock.....	Land at Elmsdale, N.S.....
16439	Dec. 1..	Geo. Dumont.....	Land at Rogersville, N.B.....
16442	" 5..	Town of Sydney.....	Privilege to lay 18-in. drain pipe at Sydney, N.S.....
16465	" 27..	I. B. Shaffner & Co.....	Land at Elmsdale, N.S.....
	1907.		
16511	Feb. 8..	K. Lord.....	Privilege to lay drain pipe at L'Islet, Que.....
16515	" 27..	Chas. Love.....	Privilege to lay 1-in. water pipe two miles east Marysville, N.B.....
16516	" 20..	J. H. Hewson and A. A. Jones.....	Land at Amherst, N.S.....
16520	March 6..	Walter C. Bishop.....	Privilege to lay and maintain an 8-in. sewage pipe at Dartmouth, N.S.....
16526	" 11..	T. Ouellette.....	Land at St. Eloi Station, Que.....
16533	" 6..	Town of Dartmouth.....	Privilege to lay 20-in. sewer pipe under tracks at King Street.....
16551	" 25..	James Barclay.....	Land at Lansdowne, N.S.....
16552	" 25..	Jno. Fenderson & Co.....	Land at Sayabec, P.Q.....
16560	" 1..	Saunderson Manufacturing Co., Ltd.	Land at Sydney, N.S., and privilege to lay 1½-in. pipe across I.C.R.....

PRINCE EDWARD

	1906.		
16318	Sept. 10..	Charlottetown Steam Navigation Co. Ltd.....	Land at Summerside, P.E.I.....
16362	Oct. 8..	Dept. Marine and Fisheries.....	Pt. of wharf at Georgetown.....

CHAMBLY

	1906.		
16443	Dec. 7..	Francois Toupin.....	Land in Chambly Basin Village.....

3.

Canals during the Nine months forming the Fiscal Year ended March 31, 1907,

RAILWAY.

Area.	Amount of Water Power.	Term.	Commencement of Term.	Terms of Payment. Annual Rental.	Due each Year.	First Instalment Due.
				$ cts.		
.....	.....	During pleasure..	Jan. 1, 1906	5 00	Jan. 1..	Jan. 1, 1906
.....	.....	5 years.....	May 1, 1906	8,000 00	Monthly...	Monthly.
.....	.....	3 years.....	Sept. 1, 1906	25 p. c. gross receipts to Ry., 10 p. c. gross receipts to agents.	" ...	"
3·70 acres.....	.....	During pleasure..	July 1, 1906	1 00	July 1..	July 1, 1906
.....	.....	" ..	" 1, 1906	1 00	" 1..	" 1, 1906
6,900 sq. ft....	.....	" ..	March 1, 1906	25 00	March 1..	March 1, 1906
.....	.....	" ..	.....	5 00	Oct. 1..	
320 sq. ft.....	.....	" ..	Sept. 1, 1906	2 00	Sept. 1..	Sept. 1, 1906
.....	.....	" ..	July 1, 1906	1 00	July 1..	July 1, 1906
1,500 sq. ft....	.....	" ..	Sept. 1, 1906	5 00	Sept. 1..	Sept. 1, 1906
1767.....	.....	" ..	" 1, 1906	2 00	" 1..	" 1, 1906
370.....	.....	" ..	July 1, 1905	1 00	July 1..	July 1, 1905
5,200 sq. ft....	.....	" ..	Nov. 1, 1906	5 00	Nov. 1..	Nov. 1, 1906
.....	.....	" ..	July 1, 1906	1 00	July 1..	July 1, 1906
729, 1,500.....	.....	" ..	" 1, 1906	5 00	" 1..	" 1, 1906
.....	.....	" ..	Dec. 1, 1906	1 00	Dec. 1..	Dec. 1, 1906
.....	.....	" ..	July 1, 1906	1 00	July 1..	July 1, 1906
1,150 sq. ft....	.....	" ..	Jan. 1, 1907	5 00	Jan. 1..	Jan. 1, 1907
.....	.....	" ..	July 1, 1906	1 00	July 1..	July 1, 1906
1,560 sq. ft....	.....	" ..	Jan. 1, 1907	5 00	Jan. 1..	Jan. 1, 1907
.....	.....	" ..	" 1, 1907	5 00	" 1..	" 1, 1907
476 sq. ft.....	.....	" ..	Dec. 1, 1906	1 00	Dec. 1..	Dec. 1, 1906
5,174 sq. ft....	.....	" ..	Sept. 1, 1906	5 00	Sept. 1..	Sept. 1, 1906
40 sq. ft.....	.....	" ..	Jan. 1, 1907	5 00	Jan. 1..	Jan. 1, 1907

ISLAND RAILWAY.

1,904 sq. ft....	.....	During pleasure..	Aug. 15, 1905	100 00	Aug. 15..	Aug. 15, 1905
1,050 sq. ft....	.....	" ..	Dec. 1, 1905	1 00	Dec. 1..	Dec. 1, 1905

CANAL.

400 sq. ft.....	.....	During pleasure..	Nov. 1, 1906	1 00	Nov. 1..	Nov. 1, 1906

WATER POWER and other Public Property leased by the Department of Railways and

CORNWALL

No. of Lease.	Date of Signature.	Lessee.	Property Leased.
	1906.		
16361	Oct. 8..	Sisters of Hotel Dieu.....	Pts. lots 12 and 13, 1st con., tp. Cornwall, Ont.....
16426	Nov. 5..	Bell Telephone Co. of Canada, Ltd..	Privilege to erect and maintain telephone line between waterworks power-house and Ottawa & New York Ry. Co's bridge.....
16427	" 5..	" " ..	Privilege to erect and maintain telephone line across canal, and from King's highway to St. Lawrence river, &c.....

LACHINE

	1906.		
16267	July 24..	The Simplex Ry. Appliance Co. of Canada, Ltd.....	Privilege to lay and maintain an 8-in. water pipe, and draw water from canal.....
16315	Aug. 30..	T. Préfontaine & Co.....	Land adjacent to Brewster's bridge, Montreal.....
16356	Oct. 8..	Grand Trunk Ry. Co.....	Privilege to lay siding on north bank to premises of Standard Chemical Co.....
16357	" 8..	"	Privilege to lay an 8-in. pipe above Côte St. Paul bridge, and draw water, &c.....
16358	" 8..	Montreal Rolling Mills Co.....	Land on north side of Canal near Brewster's Bridge...
16359	" 8..	" "	" " " ....
16372	" 10..	Town of Lachine.....	Pt. of south bank of Old Canal.....
16421	Nov. 3..	G.T. Ry. Co. of Canada.....	Privilege to lay, maintain and operate 6 sidings on N. bank of canal east of Atwater Ave., Montreal....
16466	Dec. 20..	Dominion Wire Mfg. Co., Ltd.....	Land on long pier on S. side of canal entrance at Lachine.....
	1907.		
16473	Jan. 8..	T. M. Fox.....	Privilege to lay 2-in. pipe from canal to Cad. lot 3601, Par. Montreal and privilege to draw water.....
	1906.		
16477	Dec. 28..	Patrick McCrory.....	Lot 17, St. Gabriel Basin No. 3, St. Ann's Ward Montreal.....
16484	" 28..	F. Robertson.....	Lot 21, St. Gabriel Basins 2 and 3, St. Ann's Ward, Montreal.....
	1907.		
16512	Jan. 31 .	J. B. Bonhomme.....	Land on S. side of canal, St. Gabriel Ward Ward.....
16517	Feb. 21..	Pure Ice Co., Ltd.....	Land on N.W. side of canal, near Brewster's bridge...
16525	" 25..	Montreal Water & Power Co.....	Privilege to lay double line of 36-in. pipe in St. Henri.
16529	March 6..	J. Laberge.....	Land on S. side canal, St. Gabriel Ward, Montreal....
16530	" 15..	R.O. & A.B. MacKay.....	Land on N. side of Lower Basin No. 1.....
16531	Feb. 23..	The Royal Insurance Co.....	Offices in Lessor's building, Montreal.....

RIDEAU

	1907.		
16495	Jan. 15..	Can. Atlantic Ry. Co.....	Agree. varying Leases Nos. 12050, 12051, 12162, and 12554.....
16546	March 22..	Rowan, Birkett & Chisholm.....	Privilege to dredge from bed of water of canal.....

SAULT STE.

	1906.		
16384	Oct. 24..	Sault Ste. Marie Bridge Co.....	Two parcels land on St. Mary Island, District of Algoma, Ont., with right of working bridge.....

Canals during the Nine months forming the Fiscal Year ended March 31, 1907—*Con.*

CANAL.

Area.	Amount of Water Power.	Term.	Commencement of Term.	Terms of Payment. Annual Rental.	Due each Year.	First Instalment Due.
				$ cts.		
19.65 acres		During pleasure	July 1, 1906	1 00	July 1	July 1, 1906
		"	Sept. 1, 1906	5 00	Sept. 1	Sept. 1, 1906
		"	" 1, 1906	2 00	" 1	" 1, 1906

CANAL.

		During pleasure	July 1, 1905	360 00	July 1	July 1, 1905
29,655 sq. ft		"	Aug. 1, 1906	311 37	Aug. 1	Aug. 1, 1906
		19 years	July 1, 1906	18 45	July 1	July 1, 1906
		During pleasure	Jan. 1, 1906	10 00	Jan. 1	Jan. 1, 1905
11,950 sq. ft		"	Sept. 1, 1906	250 00	Sept. 1	Sept. 1, 1906
300 sq. ft		"	" 1, 1906	5 00	" 1	" 1, 1906
		"	May 1, 1906	1 00	May 1	May 1, 1906
		19 years	July 1, 1906	10 00	July 1	July 1, 1906
3,000 sq. ft		During pleasure	Dec. 1, 1906	25 00	Dec. 1	Dec. 1, 1906
		"	Jan. 1, 1907	30 00	Jan. 1	Jan. 1, 1907
16,912 sq. ft		"	Aug. 1, 1907	211 40	Aug. 1	Aug. 1, 1907
16,912 sq. ft		"	May 1, 1907	174 40	May 1	May 1, 1907
9,650 sq. ft		2 years	Jan. 1, 1907	144 40	Jan. 1	Jan. 1, 1907
5,550 sq. ft		During pleasure	Dec. 1, 1906	222 00	Dec. 1	Dec. 1, 1906
		"	Jan. 1, 1907	10 00	Jan. 1	Jan. 1, 1907
6,000 sq. ft		"	" 1, 1907	96 00	" 1	" 1, 1907
19,450 sq. ft		"	Sept. 1, 1906	586 20	Sept. 1	Sept. 1, 1906
		5 years	May 1, 1907	2,200 00	Quarterly	Aug. 1, 1907

CANAL.

		21 years	Jan. 1, 1904	500 00	July 1	July 1, 1907

MARIE CANAL.

0·576, 1.483 ac.		21 years	May 1, 1899	20 00	May 1	May 1, 1899

WATER POWER and other Public Property leased by the Department of Railways and

SOULANGES

No. of Lease.	Date of Signature.	Lessee.	Property Leased.
	1906.		
16382	Oct. 23..	Louis Giroux	Land, lots Nos. 235 and 240, Par. of St. Ignace, Co. of Soulanges, Que.
	1907.		
16524	Jan. 31..	N. and A. Bourbonnais	Pt. Cad. lot 130, Par. St. Ignace de Coteau du Lac. Co. of Soulanges, Que., &c.

TRENT

	1906.		
16376	Oct. 15..	R. H. Quinn	Lease of ½ acre of land, part of lot 32, 8th Con. Tp. of Eldon, Co. of Victoria, Ont., and privilege of taking stone piled thereon.
16377	" 15..	Jas. Davidson	Lease of land, Pt. of lot 32, 8th Con., Tp. of Eldon, Co. of Victoria, Ont.

WELLAND

	1906.		
16261	July 23..	Canadian Colored Cotton Mills Co., Ltd.	Certain canal reserve land in the Town of Merritton together with surplus water.
16302	Aug. 27..	Edward Hughes	Part of lot No. 26 in the 5th Con. of Tp. of Crowland, Co. of Welland.
16303	" 18..	M. Beatty & Sons, Ltd.	Part of lot No. 26 in 5th Con. of Tp. of Crowland, Co. of Welland.
16365	Oct. 10..	Ontario Power Co. of Niagara Falls.	Privilege to erect power transmission line in Tp. of Thorold, Ont., and to cross canal at several points between Allanburg and Port Colborne, and 8 par. land.
16378	" 23..	R. W. Leonard	Land in City St. Catharines, being part of lot 19, Con. 6, Tp. of Grantham, Ont.
16380	" 24..	The Thorold Natural Gas Co.	Privilege to lay and maintain a 4-in. gas pipe across old canal on line of Albert St., Thorold, Ont.
16434	Nov. 24..	Thos. Lannon	Land, part of lot 27, Con. 1, Tp. of Humberstone, Co. of Welland, Ont.
16435	" 24..	Can. Niagara Power Co.	Privilege to carry transmission power cables across Chippawa Creek.
16438	Dec. 1..	Hon. R. Harcourt	Land on S. side of West Main St., Welland, Ont.
16446	Nov. 20..	City of St. Catharines	Privilege to lay, &c., 6-in. water main along S. side of Old Canal.
16486	Dec. 20..	Erie Telephone Co., Ltd.	Privilege to erect telephone line between Byng and Dunnville, and bridge over Grand River, and to lay submarine cable across Feeder.
	1907.		
16527	March 2..	D. Carter	Pts. lot 28, 1st Con., Tp. Humberstone, Co. Welland, Ont.
16539	" 16..	Can. Portland Cement Co.	Land in Pt. Colborne, Ont.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 3, 1907.

Canals during the Nine months forming the Fiscal Year ended March 31, 1907—*Con.*

CANAL.

Area.	Amount of Water Power.	Term.	Commencement of Term.	Terms of Payment. Annual Rental.	Due each Year.	First Instalment Due.
				$ cts.		
18 acres		During pleasure	Sept. 1, 1906	16 00	Sept. 1	Sept. 1, 1906
3 00, 6·50 acres		1st parcel, during pleasure. 2nd parcel, 21 years.	Nov. 1, 1906	57 00	Nov. 1	Nov. 1, 1906

CANAL.

1·61 acres		During pleasure	Sept. 1, 1906	20 00	Sept. 1	Sept. 1, 1906
1·61 acres		"	" 1, 1906	20 00	" 1	" 1, 1906

CANAL.

		21 years	July 1, 1902	£120 00	Jan. & July	
0·22 acre		During pleasure	Aug. 1, 1906	10 00	Aug. 1	Aug. 1, 1906
1·45 acres		"	" 1, 1906	100 00	" 1	" 1, 1906
		10 yrs. renewable.	Sept. 1, 1906	100 00	Sept. 1	Sept. 1, 1906
0·21 acre		During pleasure	" 1, 1906	5 00	" 1	" 1, 1906.
		"	April 1, 1906	10 00	April 1	April 1, 1906
0·34 acre		"	Nov. 1, 1906	25 00	Nov. 1	Nov. 1, 1906
		"	" 1, 1906	1 00	" 1	" 1, 1906
0·02 acre		"	Dec. 1, 1906	15 00	Dec. 1	Dec. 1, 1906
		"	Nov. 1, 1906	5 00	Nov. 1	Nov. 1, 1906
		"	Sept. 1, 1906	5 00	Sept. 1	Sept. 1, 1906
0·24, 0.46 ac.		"	Jan. 1 1907	10 00	Jan. 1	Jan. 1, 1907
11·20 acres		21 yrs. renewable.	March 1, 1907	134 40	March 1	March 1, 1907

HAZEN HANSARD,
Law Clerk.

No.

PROPERTY CONVEYED to the Department of Railways and Canals and Letters Patent

CANADIAN PACIFIC

No. of Deed.	Date of Signature.	Grantor.	Lot.
	1905.		
*16387	Jan. 31..	Ashton W. Spilsbury	Part of W. subdivision, lot 326, township 11
	1904.		
*16388	Dec. 9..	Francis A. Spilsbury	Lots 27, 28 and 29 in town of Port Moody, being W. subdivision of lot 326, township 11.

INTERCOLONIAL

	1906.		
*16304	June 15..	P. M. Duggan, *et ux*	Land at
*16307	" 11..	Jos. R. Henderson, *et ux*	"
	1904.		
*16308	Sept. 29..	The Alex. Gibson Ry. & Mfg. Co.	The Canada Eastern Ry
*16309	" 29..	" " "	Rights to take water and ballast along line of Canada Eastern Ry.
	1906.		
*16311	May 28..	The Eastern Trust Co. (adm. of late T. F. Jenkins).	Land on N. side of Upper Water Street
*16331	" 5..	Noel Paré	Part lot 141
	1905.		
*16393	May 31..	Ed. M. Wilson	Land on S. side of Gray's Lane
	1906.		
16429	July 27..	Geo. Shaffer	Land on W. side of Upper Water St.
16430	" 28..	S. J. Lawrence	Land at
16462	Oct. 10..	Caroline Smith	Land in rear of Lockman St
16481	July 9..	Dan. L. McPhee, *et ux*	Land in
16510	Sept. 4..	A. P. E. Parent	Part lot 586
16540	Oct. 27..	Wm. S. Cunard, *et al*	Land on E. side of Campbell Road
16541	" 25..	A. M. Bell, *et ux*	Land in rear of Upper Water St
16542	Nov. 5..	Jno. Townshend	Land on E. side of Windsor St
	1907.		
16613	Feb. 28..	Ed. Kiegan, *et ux*	Land between
16614	Mar. 12..	Henry Vickers, *et ux*	Land at
16637	" 7..	G. B. Terran	"
16639	" 7..	"	Farm crossing at
16655	Feb. 13..	Jno. J. Robertson	Land in
16667	Mar. 22..	Thos. Ritchie, *et al*	Land at

PRINCE EDWARD

	1906.		
16472	Oct. 5..	A. J. Carruthers	Part lot 19
16653	Dec. 27..	Jno. G. McDonald	Land at

* Too late for last year's report.

4.

granted during the Nine months forming the Fiscal Year ended March 31, 1907.

RAILWAY.

District.	County.	Area.	Amount.	Remarks.
			$ cts.	
New Westminster		5·88 acres	1 00	
"		5·88 "	1,201 39	

RAILWAY.

Lakeview	Halifax, N.S.	4·3 acres	1,182 50	
Halifax	"	34·78 "	45,400 00	
			800,000 00	
			1 00	
Halifax	Halifax, N.S.	10,117 sq. ft	1,800 00	
Ste. Helene Parish	Bagot, Que.	16,779 "	200 00	
Halifax	Halifax, N.S.	2,911 "	1,300 00	
"	"	828 "	1,600 00	
Fort Lawrence	Cumberland, NS.	0·88 acre	123 20	
Halifax	Halifax, N.S.	1,216 sq. ft	350 00	
North Sydney	Cape Breton, N.S.	10,758 "	500 00	
Notre Dame de Liesse de la Rivière Ouelle Parisl.	Kamouraska, Que.	2·53 acres	65 00	
Halifax	Halifax, N.S.	0·096 "	250 00	
"	"	5,712 sq. ft	7,500 00	
"	"	26,000 "	3,000 00	
N. Sydney & Sydney Mines	Cape Breton, N.S.	500 "	150 00	
Sydney Mines	" "	3,294 "	150 00	
Bedford	Halifax, N.S.	0·1 acre	100 00	
"	"		250 00	
Sydney Mines	Cape Breton, N.S.	2,108 sq. ft	100 00	
Bedford	Halifax, N.S.	0·03 acre	50 00	

ISLAND RAILWAY.

	Prince, P.E.I.		150 00	
Vernon River Bridge	Queen's, P.E.I.	9 acres	1,100 00	

PROPERTY CONVEYED to the Department of Railways and Canals and Letters Patent

RAPIDE PLAT

No. of Deed.	Date of Signature.	Grantor.	Lot.
	1906.		
16468	Dec. 31..	His Majesty to Mary E. Robertson.	Parts W. ½ lot 7 and E. ½ lot 8, concession 1.....

SAULT STE. MARIE

	1906.		
16461	Dec. 12..	Ontario Govt. to Govt. of Canada.	Two parcels of land covered with water.....

TRENT

	1906.		
16389	Sept. 10..	Toronto University.....	Part lot 15 in concession 12.....
*16448	Jan. 22..	United Counties of Northumberland and Durham, *et al.*	'Bensfort,' 'Wallace Point,' 'Hastings' and 'Trent' or 'Narrows' swing bridges.
16505	July 5..	Public Works Dept. to Railways and Canals Dept.	Control of works at Chisholm's Rapids, &c.....

* Too late for last year's report.

DNPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 3, 1907.

granted during the Nine months forming the Fiscal Year ended March 31, 1907—*Con.*

CANAL.

District.	County.	Area.	Amount.	Remarks.
			$ cts.	
Matilda Township.....	Dundas, Ont.....	3·35 acres.....		Letters patent.

CANAL.

Sault Ste. Marie.....	Algoma, Ont.....	50 ac., 5 ac.	.....	Order in Council.

CANAL.

Seymour Township.....	Northumberland, Ont.....	.....	200 00	
S. Monaghan Tp., Hastings Village and Seymour Tp.	.....	.....	1 00	
.....	.....	.....	.....	

HAZEN HANSARD,
Law Clerk.

No. 5.

DAMAGES released to the Department of Railways and Canals during the Nine months forming the Fiscal Year ended March 31, 1907.

INTERCOLONIAL RAILWAY.

No. of Release.	Date of Signature.	Grantor.	Descritpion.	Amount.
	1906.			$ cts.
16277	July 17..	A. Guimont, *et al*.....	Damages for injuries sustained.....	200 00
16441	Oct. 2..	Henrietta O'Dell.....	Damages to house No. 17, Gray's Lane, Halifax, N.S.	250 00
16467	Dec. 26..	R. G. & Wm. Hood.....	From any damage, &c., that may arise when travelling on engines and vans.	.....

CHAMBLY CANAL.

	1906.			
16386	Aug. 4..	Cecile Briggs.....	Damages by water to 184 arpents of land, lot No. 217, parish of St. Luc, Co. of St. John's, Que.	2,000 00
16463	Dec. 26..	Ambrose Kinney.....	Damages sustained by boat *R. I. Patrick* while passing through Chambly Canal.	20 00

CULBUTE CANAL.

	1906.			
16296	Aug. 4..	Patrick J. Cully, *et al*.....	Damages by flooding to W. ½ lot 35 and lots 36 and 37 in E. range of Allumette Island.	420 00

SOULANGES CANAL.

	1906.			
*16297	Mar. 1..	Amable Clement.....	Damages to parts lots 427 and 428, parish of St. Joseph de Soulanges, Co. of Soulanges, Que.	80 00

TRENT CANAL.

	1906.			
*16397	Feb. 5..	Catherine Conroy.....	For damage by water in city of Peterborough, Ont., lot 20, W. of Concession St.	350 00
*16398	" 20..	Mary Jane McQua.....	For damages by water in city of Peterborough, Ont., lot 57, W. of Rogers.	600 00
	1905.			
*16399	Aug. 22..	Eliza L. Beattie.....	For damages by water in city of Peterborough, Ont., lot 18, in Ashburnham.	150 00
*16400	" 21..	Nellie Courtenay.....	For damages by water in city of Peterborough, Ont., lot N. ½ 16, in Ashburnham.	250 00

* Too late for last year's report.

SESSIONAL PAPER No. 20

DAMAGES released to the Department of Railways and Canals during the Nine months forming the Fiscal Year ended March 31, 1907—*Concluded.*

TRENT CANAL—*Concluded.*

No. of Release.	Date of Signature.	Grantor.	Descritpion.	Amount.
	1906.			$ cts.
*16401	Feb. 2..	Jas. Ballantyne, *et ux*.....	For damages by water, city of Peterborough, Ont., lot 15, W. of Concession and N. of Maria.	500 00
*16402	" 2..	William Campbell.....	For damages by water, city of Peterborough, Ont., S. ½ of lot 16, W. of Concession.	250 00
*16403	" 19..	Charles Noyes, *et ux*.....	For damages by water, city of Peterborough, Ont., lot 18.	250 00
*16404	" 20..	Annette Dover, *et al*.....	For damages by water, city of Peterborough, Ont., lots 60, 61, 62, W. of Rogers and N. of Maria.	500 00
*16405	Mar. 8..	James May, *et ux*.....	For damages by water, city of Peterborough, Ont., lot 21, N. of Maria and W. of Concession.	500 00
*16406	" 12..	David Dennie, *et ux*.....	For damages by water, city of Peterborough, Ont., block 'W,' E. of Concession.	1,000 00
*16407	Jan. 16..	Martin Hobbins.....	For damages by water, city of Peterborough, Ont., lot 9, W. of Concession and S. of Maria.	200 00
*16408	Mar. 16..	R. F. McWilliams, *et ux*....	For damages by water, city of Peterborough, Ont., lots 63, 64 and 65, S. of Maria and W. of Concession.	150 00
*16409	Feb. 20..	William Henthorn.....	For damages by water, city of Peterborough, Ont., lot 25, E. of Rogers St.	150 00
*16410	Mar. 10..	Janet Moffat, *et al*.....	For damages by water, city of Peterborough, Ont., lot 59, township of Douro.	350 00
*16411	Feb. 28..	Elizabeth Arnow.....	For damages by water, city of Peterborough, Ont., lot 10, S. of Maria and W. of Concession.	400 00
*16412	" 23..	John Henthorn, *et ux*.....	For damages by water, city of Peterborough, Ont., lot 25, E. of Rogers St.	350 00
*16413	" 3..	Wm. Beattie, *et ux*.....	For damages by water, city of Peterborough, Ont., lot 17, W. of Concession St.	550 00
*16414	" 16..	A. J. Kidd, *et ux*.....	Damage by water to part lots 16 and 17, concession S, township of Douro, Ont.	323 72
16432	Oct. 30..	Mark Curtis, *et al*.....	Damages by water to four parcels of land in township of Otonabee, Co. of Peterborough, Ont., and to lumber, machinery and brickyard thereon.	4,898 00
16454	Dec. 20..	Ronald McKay.....	Damages consequent upon loss of a heifer by drowning in Trent Canal.	40 00
*16543	Jan. 5..	Margaret Cleary, *et al*.....	Damages to parts lot 3, concession 12, township of Douro, Co. of Peterborough, Ont.	50 00
*16587	Jan. 23..	Dan. Maloney, *et ux*.....	Damages to part lot 9, concession 10, township of Douro, Co. of Peterborough, Ont.	35 00
16604	Dec. 13..	Jno. McLean, *et al*.....	Damages to part lot 57, W. of Rogers St., Peterborough, Ont.	150 00

* Too late for last year's report

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, August 3, 1907.

HAZEN HANSARD,
Law Clerk.

INDEX

	Part.	Page.
A		
ACCIDENTS and casualties :—		
Intercolonial	II	110
Prince Edward	II	133
ANNAPOLIS and Digby Railway, expenditure on construction	I	41
ACCOUNTANT and Auditor of P.E.I. Ry., Statements of the	II	127
ACCOUNTANT of Department, Statements of the	I	3
Collectors of Canal Tolls in account with Revenue	I	30
Expenditure during fiscal period ended March 31, 1907	I	3
" on construction, maintenance, &c., of canals	I	5
" on construction and enlargement of canals	I	27
Baie Verte Canal	I	6
Beauharnois Canal	I	8
Carillon and Grenville Canal	I	17
Chambly Canal	I	21
Cornwall Canal	I	12
Culbute Lock and Dam	I	18
Farran's Point Canal	I	13
Galops Canal	I	13
Lachine Canal	I	7
Lake St. Francis	I	11
Lake St. Louis	I	10
Murray Canal	I	22
Rapide Plat Canal	I	13
Rideau Canal	I	19
Sault Ste. Marie Canal	I	25
Soulanges Canal	I	26
Ste. Anne's Lock and Canal	I	16
St. Lawrence River and Canals, Surveys, &c.	I	9
St. Ours Lock	I	20
St. Peter's Canal	I	5
Tay Canal	I	24
Trent Canal	I	23
Welland Canal	I	15
Williamsburg Canals	I	13
Hydraulic and other rents	I	29
Miscellaneous expenditure	I	48
Railway expenditure and revenue	I	46
Annapolis and Digby	I	41
Canada Eastern	I	45
Canadian Pacific	I	40
Cape Breton	I	37
Carleton Branch	I	35
Drummond County	I	42
Eastern Extension	I	34
Intercolonial	I	32
Montreal and European Short Line	I	38
National Transcontinental	I	44
Oxford and New Glasgow	I	36
Prince Edward Island	I	39
Yukon Territory Works	I	43
Railway expenditure on Capital Account	I	46
Recapitulation—Railways	I	47
" Railways and Canals	I	49
Revenue received from canals	I	28, 30, 49
Subsidies voted for railways	I	50

	Part.	Page.
B		
Baie Verte Canal, expenditure on surveys	I	6
Beauharnois Canal :—		
Description of canal	II	58
Expenditure	I	8
Operation and maintenance	II	38
Sketch showing section of lock	II	25
Superintending Engineer, Report of the	II	139
Water on mitre sill	II	145
Board of Railway Commissioners		xvi
Burpee, Mr. T. C., Engineer of Maintenance, Windsor Branch	II	118
" " " I. C. Ry	II	71
Butler, Mr. M. J. *See* 'Deputy Minister'		ix
C		
Canada Eastern Railway– Expenditure	I	45
Canadian Pacific Railway Co.—Expenditure on construction	I	40
Canal navigation routes, descriptions of	II	46
Canals Revenue	I	28, 30, 49
Cape Breton Ry., expenditure on construction	I	37
Carillon Canal :—		
Description of canal	II	53
Expenditure	I	17
Operation and maintenance	II	38
Sketch showing section of lock	II	24
Superintending Engineer, Report of the	II	142
Water on mitre sill	II	147
Carleton Branch Ry., expenditure on construction	I	35
Chambly Canal :—		
Description of route	II	56
Expenditure	I	21
Operation and maintenance	II	37
Sketch showing section of lock	II	25
Superintending Engineer, Report of the	II	140
Water on mitre sill	II	145
Chief Engineer, Report of the :—		
Beauharnois Canal, operation and maintenance	II	38
Canals, description of	II	46
Canal Statistics	II	41
Carillon and Grenville Canal, operation and maintenance	II	38
Chambly Canal, operation and maintenance	II	37
Cornwall Canal, enlargement	II	29
Operation and maintenance	II	35
Reducing shoals west of Canal	II	32
Culbute Canal	II	40
Dates of closing and opening of canals	II	41
Expenditure on construction and enlargement of canals	II	33
Farrar's Point Canal enlargement	II	29
Freight branches, I.C.R	II	6
Freight passed through each canal	II	41
Galops Canal, enlargement	II	30
Galops Rapids, Improvements	II	31
Inclosures	II	5
Intercolonial Railway	II	5, 9
Lachine Canal, enlargement	II	29
Operation and maintenance	II	34
Length of Government Railways	II	5, 44
Murray Canal, operation and maintenance	II	39
North Channel Improvements	II	32
Operations on Government Railways	II	7
Plans and sections of locks on canals	II	24
Prince Edward Island Railway	II	22
Railway Subsidies	II	41
Railways under Government control	II	7
Railway through communication between the Atlantic and Pacific	II	44
Rapide Plat Canal, enlargement	II	30
Rideau Canal, operation and maintenance	II	39

	Part.	Page.
C		
CHIEF ENGINEER, Report of the—*Concluded.*		
Sault Ste. Marie construction	II	27
Operation and maintenance	II	36
Sketches showing Sections of Canals	II	24
Soulanges Canal construction	II	27
Operation and maintenance	II	35
St. Anne's Lock, operation and maintenance	II	37
St. Lawrence River and Canals	II	32
St. Lawrence River and Lake improvements	II	31
St. Ours Lock and Dam, operation and maintenance	II	37
St. Peter's Canal " "	II	40
Summary of cost of maintenance and operation of Canals	II	40
Trent Valley Canal, construction	II	28
Operation and maintenance	II	39
Welland Canal, operation and maintenance	II	36
Deepening portions of long level	II	31
Improvements at Port Colborne	II	30
Removal of obstructions	II	31
Williamsburg Canals, operation and maintenance	II	36
Windsor Branch Railway	II	21
CHIEF ENGINEER of the Intercolonial Railway, Report of the	II	65
CHIEF ENGINEER, P.E.I. Ry., Report of the	II	118
COMPTROLLER of the Govt. Railways	II	80, 116
CORNWALL Canal :—		
Construction and enlargement	II	29, 153
Description of works	II	49
Enlargement	II	29
Expenditure	I	12
Fines and damages	II	155
Operation and maintenance	II	35
Reducing shoals	II	32
Superintendent of Operation, Report of	II	167
Water on mitre sills	II	156
CULBUTE Canal, Expenditure	I	18
D		
DEPUTY Minister, Report of the		ix
Board of Railway Commissioners		xvi
Canals		liii
Expenditure on Railways		ix
" Canals		x
General Summary		ix
Government action as to subsidized railways		xx
Government Railways in operation		xi
Intercolonial		xi
Prince Edward Island		xvi
Windsor Branch		xv
Land Subsidies		liii
Maps to accompany same	(in separate pocket)	
National Transcontinental Railway		xvii
Revenue from Government works		ix
Railway Subsidies		xix
Subsidy contracts from July, 1906, to March, 1907		xix
Subsidy payments during fiscal period ended March 31, 1907		xx
DEVEREUX, Mr. J. H. *See* "St. Peter's Canal"	II	172
DRUMMOND COUNTY Railway :—		
Capital account	II	20
Expenditure	I	42
E		
EASTERN Extension Railway, expenditure on construction	I	34
ENGINEER of Maintenance, Windsor Branch, Report of the	II	117
" " Intercolonial Ry. "	II	71
EXPENDITURE on canal works generally	I	5, 27

	Part.	Page.
F		
FARRAN'S POINT Canal :—		
Construction and enlargement	II	29
Expenditure on capital account	I	13
Description of canal	II	49
Water on mitre sills	II	156
FRIPP, Mr. F. B., *See* "Sault Ste. Marie"	II	159
G		
GALOPS Canal :—		
Construction	II	31
Description of route	II	50
Expenditure on capital account	I	13
Enlargement	II	30
Improvements	II	151
Maintenance	II	149
North Channel, improvement works	II	150
Superintending Engineer, Report of the	II	149
Water on mitre sills	II	156
GENERAL Manager of Government Railways, Report of the :—		
Intercolonial	II	60
Prince Edward Island	II	119
Windsor Branch	II	116
GOVERNMENT railways in operation	...	xi
GRAND RIVER Feeder	II	51
GRANT, Mr. A. J., *See* "Trent Canal"	II	164
GRENVILLE Canal :—		
Description of works	II	53
Expenditure	I	17
Operation and maintenance	II	38
Sketch showing section of canal	II	24
Superintending Engineer, Report of the	II	142
Water on mitre sill	II	146
'GUT Dam'	II	151
H		
HALIFAX to Montreal, distance from	II	44
HANSARD, Mr. HAZEN. *See* "Miscellaneous Statements"	IV	3
HUGGAN, Mr. *See* "Accountant and Auditor of Prince Edward Island Railway"	II	127
HYDRAULIC and other rents	I	29
I		
INTERCOLONIAL :—		
Accidents and casualties	II	110
Capital account	II	20, 60
Deputy Minister, reference to	...	xi
Chief Engineer, Report of the	II	65
Comptroller and Treasurer, Statements of the	II	80
Engineer of Maintenance, Report of the	II	71
Description of route	II	44
Expenditure, Statement by Accountant of Department	I	32
General Manager, Report of	II	60
Length of road	II	6
Mechanical Accountant, Statements of the	II	101
Revenue account	II	62
Deputy Minister, reference to	..	xii
Rolling stock	II	10
Stores account	II	64
Superintendent of motive power—report	II	101
Traffic, Statistics relating to	II	9
Working expenses	II	63
IROQUOIS Section of Williamsburg Canals	II	149

	Part.	Page.
J		
JOUGHINS, Mr. G. R., Supt. Motive Power, Intercolonial Railway	II	101
L		
LACHINE Canal –		
Construction	II	29
Description of route	II	48
Expenditure	I	7
Enlargement works	II	29
Fines and damages	II	148
Operation and maintenance	II	34
Sketch showing section of canal	II	24
Superintending Engineer, Report of the	II	135
Water on mitre sills	II	144
LAKE St. Francis, expenditure	I	11
LAKE St. Louis channel – expenditure	I	10
LAND grants made by governments to Railway Companies		liii
LITTLE, Mr. W. C. *See* "Accountant of Department"	I	3
M		
MACKENZIE, Mr. W. B. *See* "Chief Engineer, I.C.R."	II	65
See "Chief Engineer, P.E.I."	II	119
MAPS to accompany report of Deputy Minister		(in pocket)
MARCEAU, Mr. E. *See* "Quebec Canals"	II	135
MCCLELLAN, Mr. J. H., Supt. of Trent Canal	II	172
MECHANICAL Accountant of the Intercolonial, Statements of the	II	101
MECHANICAL Superintendent of Prince Edward Island Ry	II	125
MISCELLANEOUS STATEMENTS :—		
Subsidy agreements for construction of railways	IV	2
Contracts entered into	IV	4
Damages released	IV	18
Property conveyed	IV	14
Water power and other property leased	IV	8
MONTREAL and European Short Line Railway, expenditure on construction	I	38
MONTREAL, Ottawa and Kingston Canals Division, description of routes	II	52
MONTREAL to Port Arthur, route, cost, &c	II	33
MURRAY CANAL :—		
Description of works	II	50
Expenditure	I	22
Fines and damages	II	155
Operation and maintenance	II	39
Superintendent of Operation, Report of the	II	154
Water on mitre sills	II	156
N		
NATIONAL Transcontinental Railway		xvii
Expenditure	I	44
Western Division, Report of Chief Engineer	II	177
NORTH Channel, St. Lawrence River, straightening, &c., and building dam	II	150
O		
OXFORD and New Glasgow Railway, expenditure on construction	I	36
OTTAWA River Canals	II	52
P		
PACIFIC Coast to Montreal by C.P.R., distance	II	44
PERTH Branch of Rideau Navigation	II	54
PETERBOROUGH Lift Lock, sketch	II	26
PHILLIPS, Mr. A. T. *See* "Rideau"	II	165
POOLE, Mr. W. L. *See* "Mechanical Superintendent"	II	125

	Part.	Page.
P		
Port Colborne Harbour, Report of Engineer	II	157
Pottinger, Mr. D. *See* "General Manager"	II	60, 116, 119
Prince Edward Island Railway:—		
Accidents	II	133
Accountant and Auditor, Statements of the	II	127
Capital Account	II	22
Chief Engineer, Report of the	II	119
Description and length of road	II	45
Expenditure on construction	I	39
Freight earnings	II	135
General Manager, Report of the	II	119
Length of line	II	23
Mechanical Superintendent, Report of the	II	125
Rolling Stock	II	22
Superintendent, Report of the	II	120
Working expenses	II	23
Q		
Quebec Canals, Report of the Superintending Engineer	II	135
Beauharnois Canal	II	139
Carillon and Crenville Canals	II	142
Chambly Canal	II	140
Closing, dates of	II	143
Depth of water on the several mitre sills	II	144
Fines and damages	II	148
Lachine Canal	II	136
Soulanges Canal	II	138
St. Anne's Lock	II	142
St. Ours Lock	II	141
Surveys, Quebec canals	II	143
R		
Railway Subsidies:—		
Cash subsidies paid	III	3
" of fixed amounts	III	5
Chief Engineer's report, reference to	II	41
Grant of loans	III	6
" used iron rails	III	6
Loan of "	III	6
Subsidies voted for railways	I	50
Subsidy Acts passed:—		
Cash grants	III	7
Rapide Plat Canal:—		
Description of route	II	50
Expenditure on Capital Account	I	13
Enlargement and construction	II	32, 148
Superintending Engineer, Report of the	II	148
Water on mitre sills	II	156
Rheaume, Mr. L. N. *See* "St. Lawrence District"	II	148
Richelieu and Lake Champlain system of navigation	II	55
Rideau Canal:—		
Expenditure on canal	I	19
Description of route	II	53
Operation and maintenance	II	39
Perth Branch	II	54
Sketch showing section of lock	II	24
Superintending Engineer, Report of the	II	165
Water on mitre sills	II	171
River St. Lawrence and Lakes—		
Description of route	II	47
Expenditure on surveys	I	9
North Channel, improvement	II	150

	Part.	Page.
S		
SAULT STE. MARIE CANAL :—		
Construction	II	27
Description of works	II	52
Expenditure	I	25
Maintenance and operation	II	36
Superintendent, Report of the	II	160
Improvement work, Report of the Engineer in charge	II	159
Sketch showing section of lock	II	24
SCHREIBER, C., Report on Western Division of National Transcontinental Railway	II	177
SHANNON, Mr. S. L. *See* "Comptroller"	II	89, 116
SHARP, Mr. G. A. *See* "Superintendent of P. E. I. Ry"	II	120
SOULANGES CANAL :—		
Construction	II	27
Damages collected	II	148
Description of works	II	48
Engineer, Report of the	II	138
Expenditure	I	26
Operation and maintenance	II	36
Sketch showing section of lock	II	24
Water on mitre sills	II	144
STEWART, Mr. W. A. *See* "St. Lawrence Canals"	II	153
SUBSIDIES. *See* "Railway Subsidies"	III	3
SUPERINTENDENT of P. E. I. Ry., Report of the	II	120
STE. ANNE'S CANAL :—		
Description of works	II	53
Expenditure	I	16
Operation and maintenance	II	37
Superintending Engineer, Report of the	II	142
Water on mitre sills	II	147
Sketch showing section of canal	II	24
ST. LAWRENCE CANALS—Construction :		
Cornwall Canal	II	153
Galops Canal	II	149
'Gut dam'	II	151
Lockages	II	155
Rapide Plat Canal, construction	II	148
Superintendent of operation, Report of	II	153
Water on mitre sills	II	156
Williamburg Canals	II	153
ST. LAWRENCE DISTRICT :—		
Fines and Damages	II	155
Superintending Engineer, Report of the, on enlargement	II	149
Superintendent of operation and maintenance, Report of	II	153
Water on mitre sills	II	156
ST. LAWRENCE River and Lakes :—		
Description of routes	II	31
Expenditure on surveys	I	9
North Channel, construction	II	32
ST. OURS Lock and Dam :—		
Description of lock	II	55
Expenditure	I	20
Operation and maintenance	II	37
Sketch showing section of lock	II	24
Superintending Engineer, Report of the	II	141
Water on mitre sill	II	146
ST. PETER'S Canal :—		
Description of works	II	58
Expenditure on construction	I	5
Operation and maintenance	II	40
Report of Mr. Devereaux	II	172
Sketch showing section of lock	II	25
T		
TAY Canal, expenditure. *See* also "Rideau"	I	24
TRANSCONTINENTAL railway communication	II	44
Report of Engineer of Western Division	II	177

	Part.	Page.
P		
TRENT Canal:—		
Construction	II	27, 176
Description of works	II	28, 56
Engineer in charge—Report of	II	176
Expenditure	I	23
Operation and maintenance	II	39
Sketch showing lift lock at Peterboro	II	26
Superintendent—Report of the	II	172
Superintending Engineer, Report of the	II	165
W		
WALKER, Mr. J. J. *See* "Mechanical Accountant"	II	101
WALSH, Mr. E. J. *See* "Trent Canal Surveys"	II	176
WELLAND Canal:		
Damages to property	II	158
Description of canal and branches	II	51
Engineer in charge of improvements at Port Colborne	II	157
Expenditure	I	15
Grand River Feeder	II	51
Improvements at Port Colborne	II	157
Long Level, deepening portions	II	31
Operation and maintenance	II	36
Port Maitland branch	II	51
Removal of obstructions	II	31
Sketch showing section of lock	II	24
Superintending Engineer, Report of the	II	157
Water on mitre sills	II	159
Welland River branches	II	51
WELLER, Mr. J. L. *See* 'Welland Canal'	II	159
WILLIAMSBURG Canals:—		
Description of works	II	49
Expenditure	I	13
Fines and damages	II	155
Operation and maintenance	II	36
Superintendent of Operation, Report of	II	153
Water on mitre sills	II	156
WINDSOR Branch:—		
Comptroller and Treasurer, Statements of the	II	116
Engineer of Maintenance, Report of the	II	117
Description of the road	II	45
Earnings	II	23
General Manager, Report of the	II	116
Length of route	II	7, 45
Y		
YUKON Railway:—Expenditure	I	43

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